Trains

March

1944

25¢

Trains

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IN the last three years of comparative prosperity the railroads have reduced their bonded and other long-term debt by more than 900 million dollars, or more than 8 per cent of the total. This has been accomplished both by retirement of issues and by purchases of bonds in the market. In either case the result is the same, a reduction of fixed charges which puts the roads in a much better position for whatever the postwar period may bring. Fixed charges are probably reduced by considerably more than the 8 per cent figure, for many a high-interest-rate bond issue has been retired with available cash while new equipment has been purchased with low-interest-rate equipment notes. Such exchanges of interest rate cut the fixed charges but are not reflected in the figures on net reduction of long-term railroad debt.

This is not the only way in which the railroads are preparing for the future. Any business man knows that a substantial cash balance is the best hedge against sudden changes in business conditions. The railroads now have more cash on hand (including temporary cash investments) than at any time in history. This cash reserve can prove invaluable when war ends by making possible a quick start on the new equipment and improvements which will be necessary to meet competition.

The reductions in fixed charges and the cash reserve have been built up at the expense of dividend payments, which have recently been running at only about one-sixth of net income. Nothing more clearly demonstrates the determination of railroad management to take a long-term view financially.

The Rio Grande is building a new tunnel at Tennessee Pass, the Royal Gorge Route crossing of the Continental Divide. The new single-track bore, 16 x 23 feet, will provide clearance for larger loads, especially large wartime freight. After the new project is completed, the old tunnel, 14 x 18 feet, will be remodeled for use as a supplemental track over the Divide.

The Rock Island and the Milwaukee Road have let a $1,100,000 contract for the superstructure and operating machinery for their new Missouri River bridge east of Kansas City, the last link in a new 4½-mile line which will give both roads a shorter and vastly improved entrance into Kansas City. The new line is all double track except for the high-level bridge, which is gauntleted.

For the Rock Island this Kansas City improvement is only one part of a vast improvement program by which the bad spots are being ironed out of the entire line to the southwest. A petition is now before the I. C. C. for permission to construct 20.7 miles of new line between Perlee and Eldon, Ia., part of a project to reduce grades and curvature of the dip into the Des Moines River valley. Only five years ago one of the biggest pieces of railroad construction under way in the United States was the Rock Island's new crossing of the Cimarron River near Liberal, Kan., which eliminated not only a helper grade for eastbound tonnage trains but some four miles of line as well.

Each of these and many smaller improvements are helping the Rock Island handle present wartime freight, but taken collectively they may well enable the joint Rock Island - Southern Pacific Golden State Route to operate extra-fast streamliners to compete for postwar West Coast passenger business.

Nearly 60 million passengers used Grand Central Terminal, New York City, last year. The exact total was 59,929,493, highest in the history of the terminal and 17.4 per cent above 1942. Biggest day was December 24, with 222,005.

The large American railroads grew from an assortment of small local lines into big systems through a gradual process of consolidation, and this process is by no means complete. It is seldom spectacular, for the big plans of the 1920's to consolidate railroads into regional competitive systems seem to have fallen by the wayside. The process more often takes the form of gradual absorption (for purposes of corporate simplification) of leased and owned companies. Now and then a genuine acquisition comes up. The Western Maryland is now asking I. C. C. permission to buy the Cumberland & Pennsylvania, a 49-mile coal road operating out of Cumberland, Md. Several current consolidations to simplify corporate structures involve subsidiaries of the Baltimore & Ohio, the Spokane, Portland & Seattle, the Chesapeake Western, and the Lackawanna.

A. C. Kalmbach.

March, 1944 — **Volume 4 Number 5**

Chicago Union Station. *By Henry D. Rennwald.* - 4
Do You Know Timetables? *A quiz.* - - - 13
$375 in Prizes! *Contest announcement.* - - - 13
Railroads of Massachusetts. *By Edward P. Sanderson.* - 14
Adventure in Mexico. *By Wayne Leeman.* - - 26
Short Lines. *A photo story.* - - - - 32
Gold Dust Twins. *Locomotive specifications.* - - 37
Anti-Horse-Bolter. *B&O steam dummy.* - - - 38
The Man in the Tower. *By Edward Hungerford.* - 40

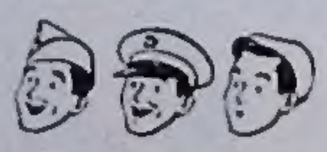
(Cover photo by Robert McKell.)

"TOURISTS" in our western wonderland

Buy War Bonds

Southern Pacific is host to thousands of men in uniform now "visiting" the West for the first time. Some had never been aboard a train till war came.

These sturdy youngsters with faces pressed against our train windows—will they want to travel again in our West after the war?



NOW THESE YOUNG MEN are riding along the bayous and cypress glades of Louisiana and across the great sweep of Texas and Arizona on our Sunset route . . .

Or down through the Middlewest and along the old Long Horn Trail on our Golden State route from Chicago to El Paso . . . across the colorful Southwest with its deserts, buttes and mesas . . .

Or on our Overland route they follow the historic path of the Forty-Niners over the High Sierra and down through the old gold workings to San Francisco. Or climb the Cascades and the Siskiyous on our Shasta route, past lakes and forests of the Pacific Northwest. They are seeing new horizons of America.

AMONG THOSE WHO KNOW these wartime tourists best are our "train riders"—the S.P. passenger representatives who act as liaison officers between the military and the railroad. The train riders tell us these boys are absorbed in what they see.

"Gee, what a *big* country!" . . . "Think I'll come back some day and fish that stream!" . . . "What crops do they raise here?" . . . "I sure would like to look around out here again when this is over!" . . . "My, this is a pretty place"—and then with constant loyalty—"but you ought to see *my* home town!"

Yes, we think many of these men now sampling the West will come back in peacetime. Then they'll see Yosemite and Lake Tahoe, Carlsbad Caverns, our giant Redwoods, Crater Lake, and other attractions.

WHAT THESE TRAVELERS think interests us as railroaders, as westerners, and as fathers with sons of our own in the service.

Right now we of the railroad are doing our best to handle a very heavy traffic load, to keep the war trains rolling, and to provide the best transportation possible during wartime.

Until this war is won it's up to each of us to give our armed forces the kind of backing that will assure the greatest number coming back safely!

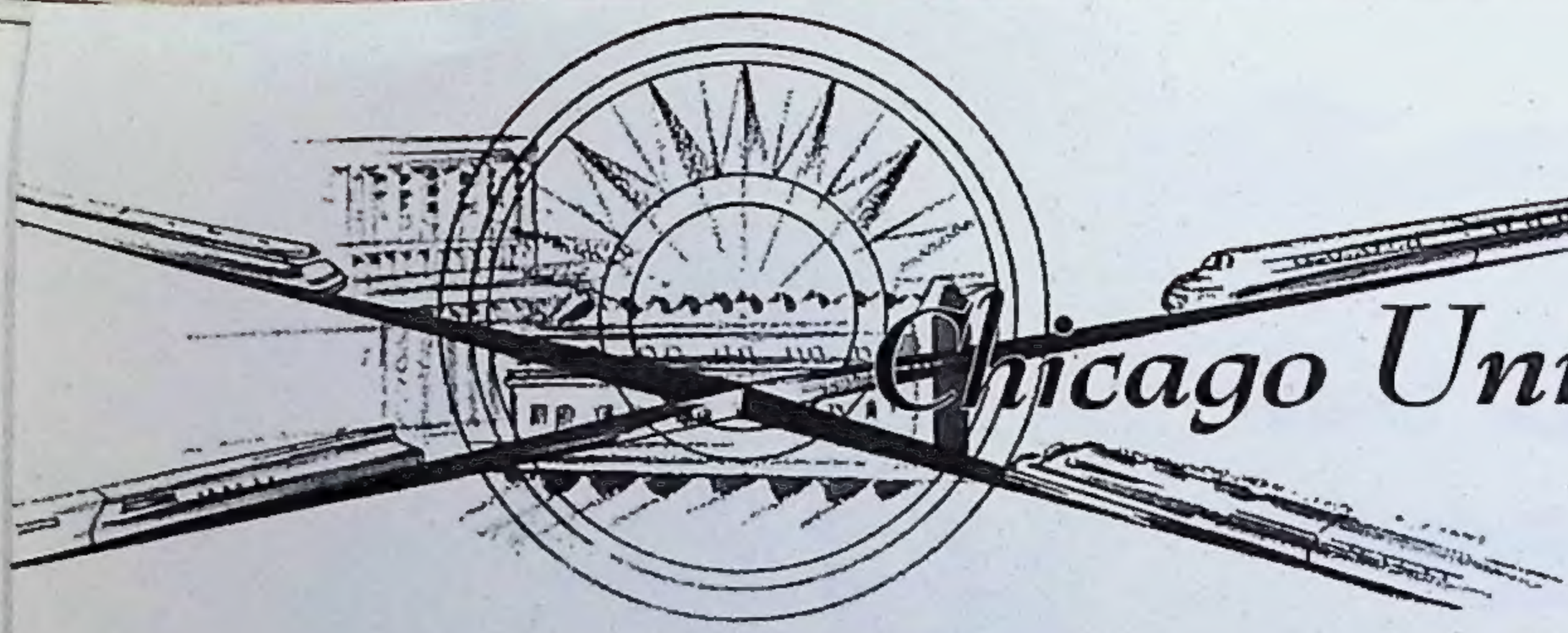
We look forward to the day when we can serve these men in better fashion. After the war we will be able to provide service not only better than the wartime variety, but improved beyond all previous standards.

S·P

The friendly Southern Pacific

HEADQUARTERS: SAN FRANCISCO

One of America's railroads—ALL united for Victory!



Chicago Union Station

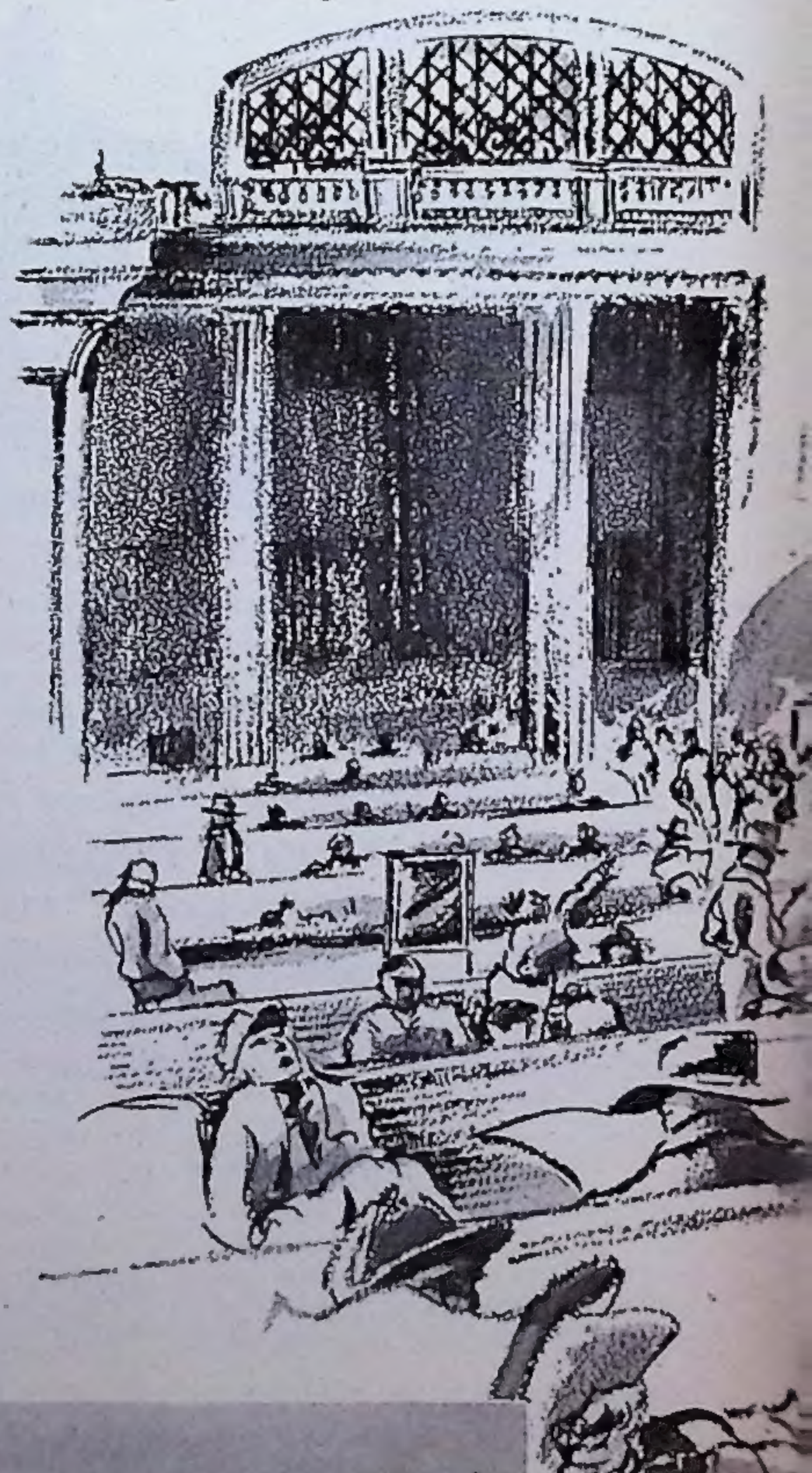
By Henry D. Rennwald.

MANY years ago, Rudyard Kipling wrote: "For East is East, and West is West, and never the twain shall meet."

However, despite Kipling, East meets West every day in the Union Station at Chicago. This daily meeting takes place when three trains from the Pacific Northwest—the *Olympian,* the *North Coast Limited,* and the *Empire Builder*—ease into the terminal just before the *New Yorker* of the Pennsylvania departs for the East Coast.

Going Kipling one better, it is even possible at Union Station to step off a Milwaukee Road train, just in from the Canadian border at Sault Ste. Marie, Mich., walk through the concourse, and board a train of the Pennsylvania departing for Florida. So, in addition to East meeting West, North also meets South in the huge terminal.

Union Station Company of Chicago is owned by three railroads: the Chicago, Burlington & Quincy, the Pennsylvania, and the Chicago, Milwaukee, St. Paul & Pacific. A fourth road, the Alton, is a tenant in the terminal. President of the station company is M. W. Clement of the Pennsylvania, and vice-presidents are: H. E. Newcomet, also of the Pennsylvania; J. T. Gillick of the Milwaukee Road, and Edward Flynn of the Burlington. O. H. Frick is general manager.



A large staff is required to move the traffic of the station and to carry on the various activities connected with it. In January of 1943, the depot had the equivalent of 925 full-time employees, while the Fred Harvey company, which operates the different concessions, had a staff of 500, plus a commercial department of 160 persons. In other words, 1585 persons are working in the station—as many as the entire population of a small town. Despite the number now employed, the war has caused a serious shortage of help, and a conservative estimate is that 30 per cent more employees are needed to bring the staff up to normal. As one example, the required number of red caps is 200, and at the present time the red-cap force consists of only 99 men.

Concourse and train sheds.

The train sheds of the Chicago Union Station may not be as impressive as the old high arches which once decorated so many American railway terminals, including the old one on this site, but they are definitely more utilitarian. The view at left looks across the south train sheds (crossed in foreground by an elevated line) toward the monumental bulk of the main concourse, with the main station building just showing at the far left. To the right is the Chicago River. The sketch is of the main waiting room.

All photos courtesy Chicago Union Station Co.

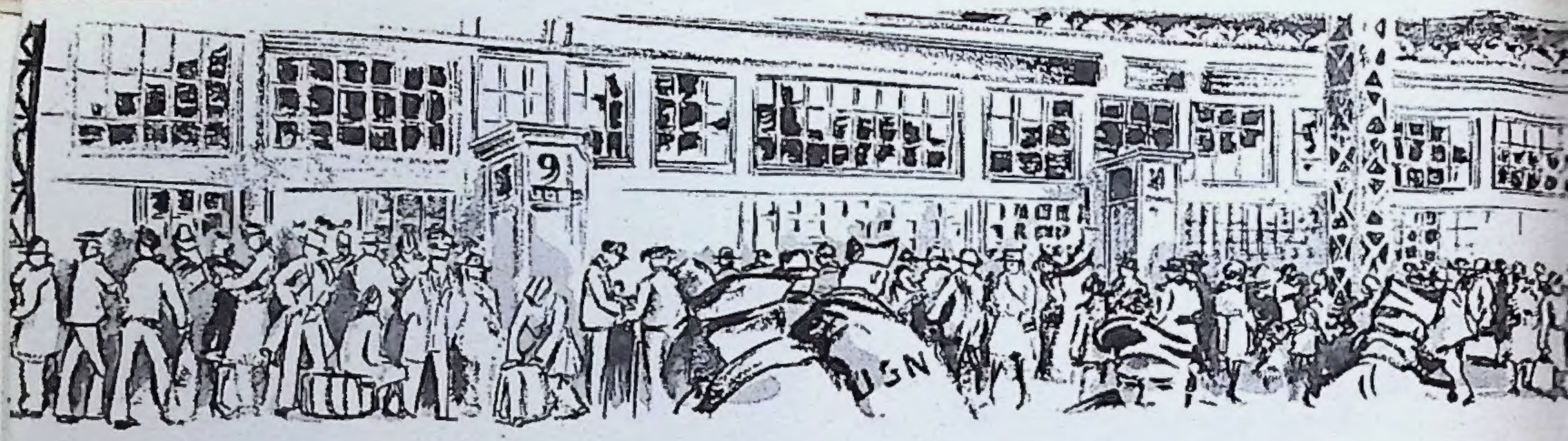
From old to new.

The upper photo shows the track over which Pennsylvania Railroad trains ran 20 or 25 years ago south of the old Chicago Union Station. The lower photo shows the early stages of construction work on the south end of the new station. This was finished first and used while the old station was being dismantled.

Unlike many other railroad terminal companies (such as those at St. Louis, Kansas City, and St. Paul, which operate their own locomotives and crews for switching duties), the Chicago company owns only the building and trackage, with each railroad handling its own transportation problems. Entire trackage owned and operated by the Union Station consists of 12.5 miles, extending on the south to Roosevelt Road and on the north to North Canal and Lake streets. The longest track is a stretch of 1.43 miles, designated as Track No. 30.

One of the unusual features of the terminal is the fact that it actually consists of two distinct units, divided into a north and a south half. By a queer quirk, the north half of the station is occupied exclusively by the Milwaukee Road, while the south half is used by the other three roads which share the terminal facilities. Consequently, one tower on the south controls that trackage, while the second tower, to the north, handles Milwaukee Road business.

The station is bordered by Clinton Street, Adams Street, Jackson Boulevard, and the Chicago River. Two tracks by-pass the station



proper on the river side and are jointly owned by the four railroads, not the station company. The two by-pass tracks, right on the bank of the river, handle a heavy volume of traffic in the course of a day.

The track layout consists of 24 platform tracks, with 10 on the north side of the station and 14 on the south side. All are stub tracks with a bumping post at the end, except Tracks 28 and 19, which run through. Therefore, unlike Grand Central in New York, where a loop track enables trains to be turned quickly, all movements in and out of the Chicago terminal require either a back-in or a back-out.

A signal supervisor recently installed an electric counting device on the south end, and after 24 hours the counter showed that an even 1000 engine moves had been made.

On the 24-track setup in the station, a total of 250 trains are operated every 24 hours, not counting extra sections of such trains as the *Broadway Limited,* the *Exposition Flyer,* the *Alton Limited,* the *Hiawatha,* the *Admiral* and the *General.* Between the hours of 7 and 9 a. m., 54 trains arrive or depart, with 33 of these moving between 8 and 9 a. m. On the south end, where tracks are even-numbered from 2 to 28, tracks numbered from 2 to 8 are normally used for suburban trains, while those from 10 to 28 are for through trains. On the north end, the odd-numbered setup from 1 to 19 can be used as the traffic warrants, since the Milwaukee Road alone uses this side of the station and hence has room without crowding. However, at times when the south end is loaded, a Pennsylvania in-bound train will be run through on Track 28 to 25, the by-pass, and unload passengers on Track 19 on the Milwaukee side of the station. The same thing may occur at night. Since many trains departing after 9 p m. are spotted to receive passengers as much as 2½ hours before departure time, it is now the practice to back a late-departing Pennsylvania train on Track 19—a so-called Milwaukee track—as there is no room on the south end.

Probably the most unusual feature of the Union Station is the fact that the entire south-end track layout runs directly under the main postoffice of Chicago. For a distance of two blocks, from Van Buren Street to Harrison Street, the trackage is directly under this huge building, and, so far as is known, this is the only place in the United States where trains operate by steam power under a building. The situation is the same on the north side, where the Milwaukee Road passes under the block-long *Daily News* Building.

On the south end, coming in through their respective yards, the Alton, Pennsylvania and Burlington merge into the six-track layout of the Union Station Company at Roosevelt Road. These, in turn, narrow down to four tracks at Polk Street. This is necessary because the postoffice department uses a large part of the layout exclusively for mail storage and loading and unloading trackage. At Van Buren Street, the four tracks fan out into the station layout. Track 2 has a capacity of six cars, Tracks 4 and 6 hold eight, Tracks 8 and 10 can handle nine cars, Tracks 12 and 14 have room for 10 cars, 16 and 18 hold 12 cars, 20 and 22 will take 14 cars, 24 and 26 have a capacity of 15, and Track 28 holds 16 cars.

All movements over this layout are controlled by the tower at Harrison Street. This tower has 134 working levers, controlling all switches and signals between Roosevelt Road and the station. The switches are operated by 100 pounds of compressed air, and the plant is of the electropneumatic type. In order to speed movements in and out, five-position signal indications are used, with three positions on the high board and a two-position dwarf signal. To follow a movement into the station, let's watch Burlington No. 22, the *Morning Zephyr,* as it arrives from Minneapolis. As No. 22 comes in on Burlington trackage it passes the tower at Union Avenue, one-half mile west and a mile south of our station tower. Over the loudspeaker comes the voice of the operator: "No. 22 by at 2:46 p. m." Looking over his track layout, the train director at Harrison Street calls out: "No. 22 on 5 to 6 to 8." The recorder, or writer, in the tower writes this out on the telautograph,

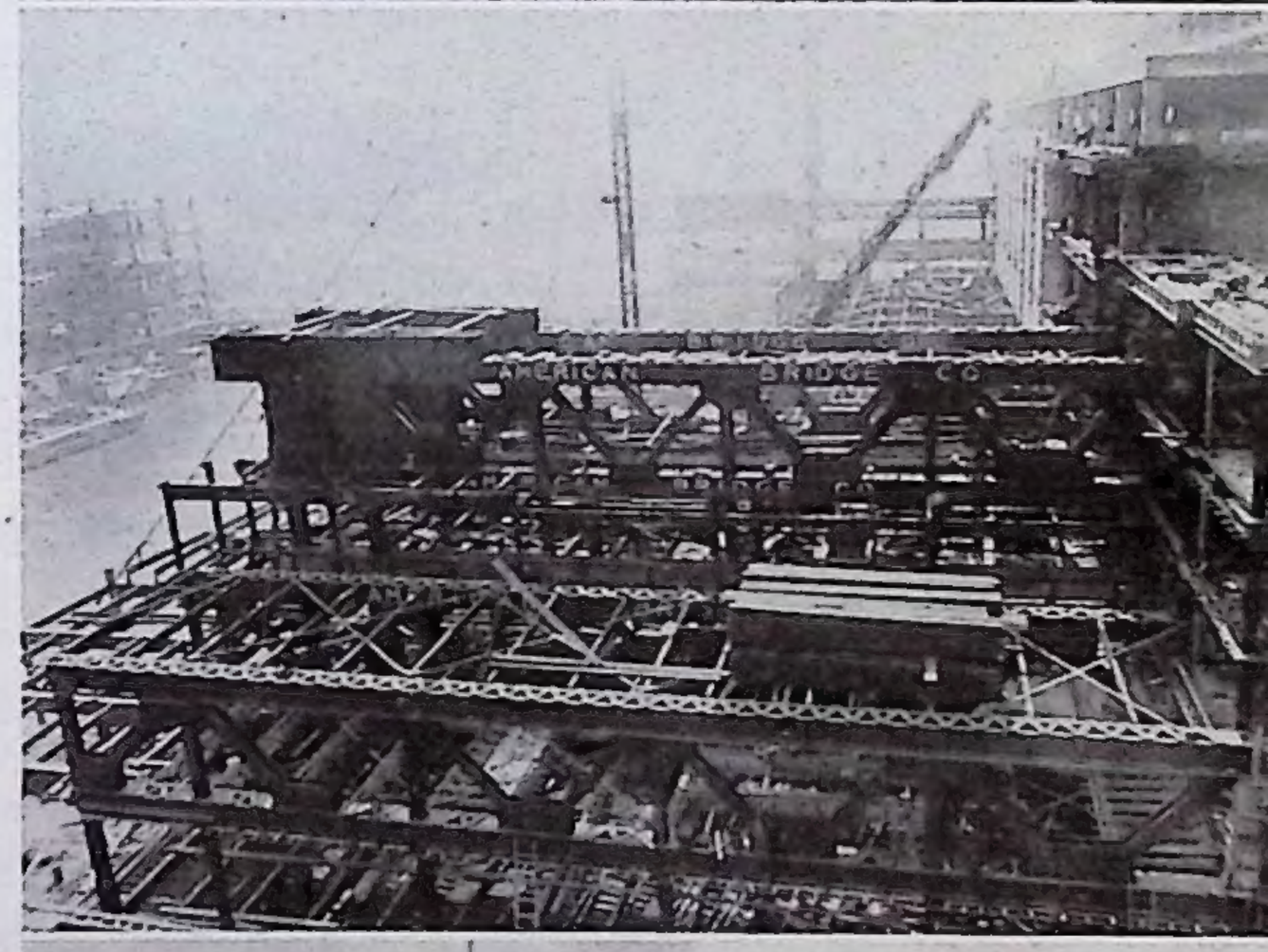
which shows the station authorities what track the *Zephyr* will come in on. The two levermen then throw the proper levers to set up the route. What the train director meant was that No. 22 was coming in on Track 5 from Union Avenue, then it would use Track 6 of the approach-track layout, and then cross over to Station Track 8.

A short time later, the loudspeaker again opens up: "Second 215 by at 3:15 p. m." This time the train director calls out "Second 215 on 7 to 8 to 24." He has lined up the route for the second section of Pennsylvania train No. 215, coming in from Louisville, Cincinnati and Columbus.

The same system is used by the Milwaukee Road in its tower at Lake Street, with trains being reported by at Western Avenue, three miles west of Union Station.

The entire trackage system is equipped with a commercial-gas line, and all slips and switches are heated in the winter to melt snow and ice, which could cause serious delays if allowed to pack down. Five thousand of these gas burners are connected throughout the trackage layout, and according to C. E. Cox, assistant chief engineer of the Union Station, despite a severe winter last year, no delays were reported due to frozen switches.

An usual train-starting system is used for departing trains. On various posts in the trainshed, buttons are installed. Let us see how the *Hiawatha* of the Milwaukee Road gets out of the depot at 1 p. m. each day. At the rear end of the station platform we see a triangular gadget hanging on the right side of Track 15. At 12:59 p. m., the conductor pushes the button



Chicago Union Station Co.

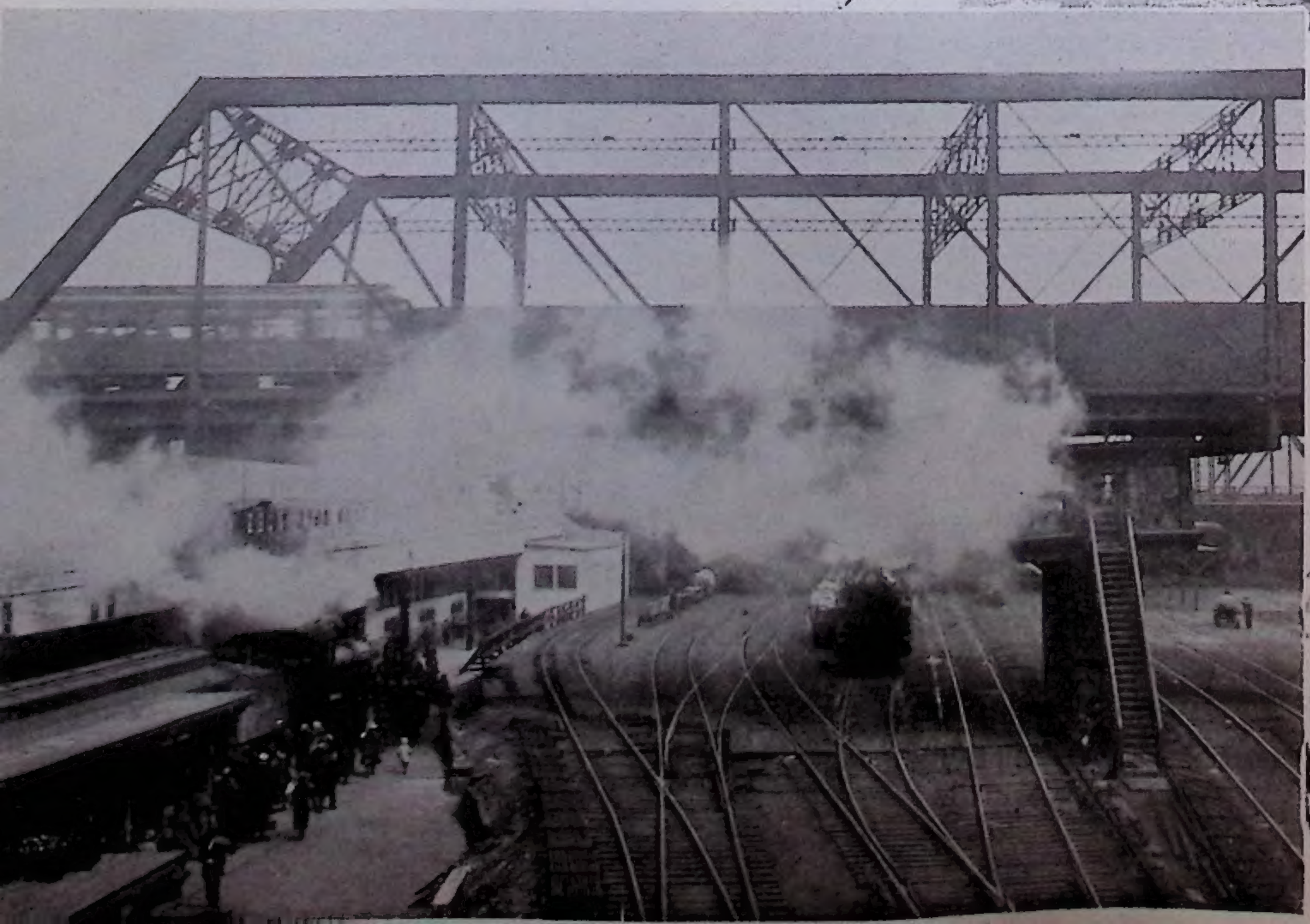
How to use air rights.

The Chicago *Daily News* leases air rights over the north throat of Chicago Union Station and has built above the tracks an attractive structure which many a newcomer to the Windy City mistakes for a railroad station. To use air rights, start, as in the top photo, with a busy terminal, and plant footings for columns between the tracks. (The building in the background is the Chicago & North Western's terminal, the only main Chicago station used by only one railroad.) After the columns are firmly planted, place heavy beams and trusses to span the tracks, and, finally, encase all in stone trim so that no one can know the tracks are there except for the adjoining train sheds.

on the post. This notifies the train director at the Lake Street tower that No. 101 is ready to move. As the button is pushed, our triangular signal shows a red light. This indication shows in the tower also, and if the train director has a clear route available, he, too, pushes a button and our light turns lunar white. As the last passenger goes through the gate, the gateman locks the door and our light turns green. The conductor, seeing the green light, pulls the train-communication cord twice, and 101 eases out of the station for its fast run to Milwaukee, St. Paul and Minneapolis. The same signal setup is used for a back-out movement of a newly arrived train, except that the green light is not necessary. After the switching crew pushes the post button notifying the tower that the train is ready to move out to the yard, the tower will give the white, signifying a route is set up to move to the Western Avenue coach yards.

The track layout on the north side of the station has a capacity of 104 cars, divided as follows: Tracks 1 and 3 hold eight cars; 5 and 7 will take nine, Tracks 9 and 11 hold 10 cars, Tracks 13 and 15 have room for 12, while 17 and 19 each take 13 cars.

Under the postoffice building there is space for loading and unloading 86 mail cars. Longest track here is Track 28, which holds 16 cars and is used principally for unloading. Mail is unloaded from the cars on this track and ad-



Business as usual.

A railroad cannot very well suspend business while a new station is being built, and in the case of the Chicago Union Station the new construction was on the same site as the old station. Construction engineers solved the difficulty by using temporary facilities catch-as-catch-can on various portions of the site while construction work went forward on other portions. The two photos on these pages show the south throat of the old station: above, while work was under way on providing temporary tracks; and, lower left, with the temporary tracks in use. These tracks later became part of the new station layout.

joining Track 30 to a high platform on which a belt moves the sacks into the distributing center of the postoffice itself.

Of all the mail moved by railroad into and out of Chicago, 40 per cent is handled by the four roads using Union Station. During 1942, a total of 1,659,576 linear feet of mail was handled on the track layout at the postoffice building, which is equivalent to 50 acres of mail, or an average of 4500 linear feet moved each 24 hours. Two roads—the Milwaukee and the Burlington —have the contract for hauling the mail between Chicago and the Twin Cities and Chicago and Omaha, respectively. Solid trainloads of mail move out from under the postoffice each night and speed north and west.

Installed at the ends of all station tracks are steam, water, air and electrical connections. Since most trains are backed down some time before departure time, without the regular road engine, it is necessary to maintain steam heat in the cars in winter and to operate the steam-jet air-conditioning systems on Milwaukee Road cars in summer. Other lines use electricity for their air-conditioning units, so these are cut in on the station line until the train and engine are coupled together for an independent supply.

While the train sheds are on the Canal Street side of the station, the main building is situated between Canal and Clinton streets, where an eight-story office building is fully occupied. The building accommodates the general offices of the Milwaukee Road, the general offices of the western region of the Pennsylvania, and many railroad-connected enterprises, a few of which are the Western Traffic Executives Committee, the Trans-Continental Freight Bureau, the

Western and Trans-Continental Passenger Association, and many others.

Construction on the imposing structure began in 1915, but was halted when the United States entered the First World War. At the end of that conflict, work was resumed and the station was formally occupied on July 25, 1925.

As one enters from the east side of Canal Street, an impressive sight meets the eye. Below is the tremendous main room, with the station track-gates lined up on the right and left sides and hundreds of persons hurrying back and forth across the station proper. At the present time approximately 100,000 persons use Union Station each day—twice the number before Pearl Harbor and World War II.

Hanging from the dome of the main room are thousands of small airplanes, and two six-by-nine-foot flags for each of the United Nations. The concourse, near the tracks, is 269 feet long, 100 feet wide, and 111 feet high. The main waiting room, on the Clinton Street side, is 245 feet long, 204 feet wide, and 90 feet to the dome.

Directly in the center of the concourse is the information booth, now presided over entirely by women. In January, 1942, there were 17 men employed in the information service, while by January, 1943, the information service was handled by 43 women.

Three large news stands handle a tremendous volume of business, with all the latest magazines, books, etc., available. In addition, the

The new and the old.

The foreground of steelwork is the framework for the headhouse and office building of the present Union Station, while behind it stands the old station building, with awnings and gables.

station has a bakery, a gift shop, a haberdashery, a toy store, several drug stores, a beauty parlor, a large barber shop, a hat-cleaning shop, and several shoeshine stands, as well as a large main dining room, a cafeteria, a lunch counter, a cocktail lounge, a regular bar, and a liquor store. With the exception of the shoeshining concession, all shops and services in the station are operated by Fred Harvey.

Adjacent to Track 2, on the west side of the train shed, is a covered passageway leading to a station of the Chicago Elevated system.

only, but the majority handle all classes, including interline and Pullman tickets. Also under Canal Street, next to the elevated-system passageway, are the offices of the depot passenger agents of the four roads using the station.

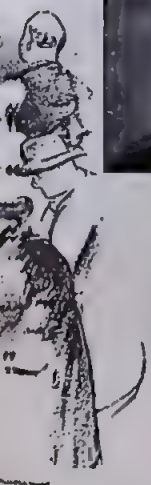
Near the depot passenger agents, the U. S. O. maintains a service men's information booth, devoted exclusively to answering questions and aiding service men passing through the station. A separate booth is set up, too, for handling only military reservations and tickets.

Hundreds of telephone booths are scattered throughout the main floor of the station. A lost-and-found office and a telegraph counter are situated close to Track 2.

Taxi cabs serving the station come in at the corner of Clinton and Adams streets and go down a ramp to the track level under the building, where they unload their passengers. Then

Old station from north.

The old Chicago Union Station of 20 and more years ago was an anomoly, a through-type station with continuous tracks, but operated as two stub-end terminals. The present station was designed as two large terminal layouts placed back to back with the concourse between.



At right is the steelwork for the concourse floor, with the station headhouse, nearly finished, in the background. Below is another view of the historic old Chicago Union Station with work just starting on the new track level. Many of today's travelers can remember none but the present 19-year-old station.

Directly under Canal Street are the parcel checkroom and the baggage room for incoming and outgoing baggage. The parcel room handles an average of 2600 pieces each day. In addition to these checking facilities, 500 lockers for storage are scattered throughout the station. Also under Canal Street are the ticket windows, with 16 windows now in almost continuous operation. Several are devoted to sale of coach tickets

they enter a circular tunnel to arrive at the loading platform, and leave with their passengers at the corner of Jackson and Clinton streets. Fred Harvey has a restaurant down in the sub-basement for the taxi drivers. Here, as elsewhere, due to wartime restrictions, a shortage of cabs is evident. But even so, with the arrival of a mainline train at the station, from 12 to 15 cabs a minute are loaded.

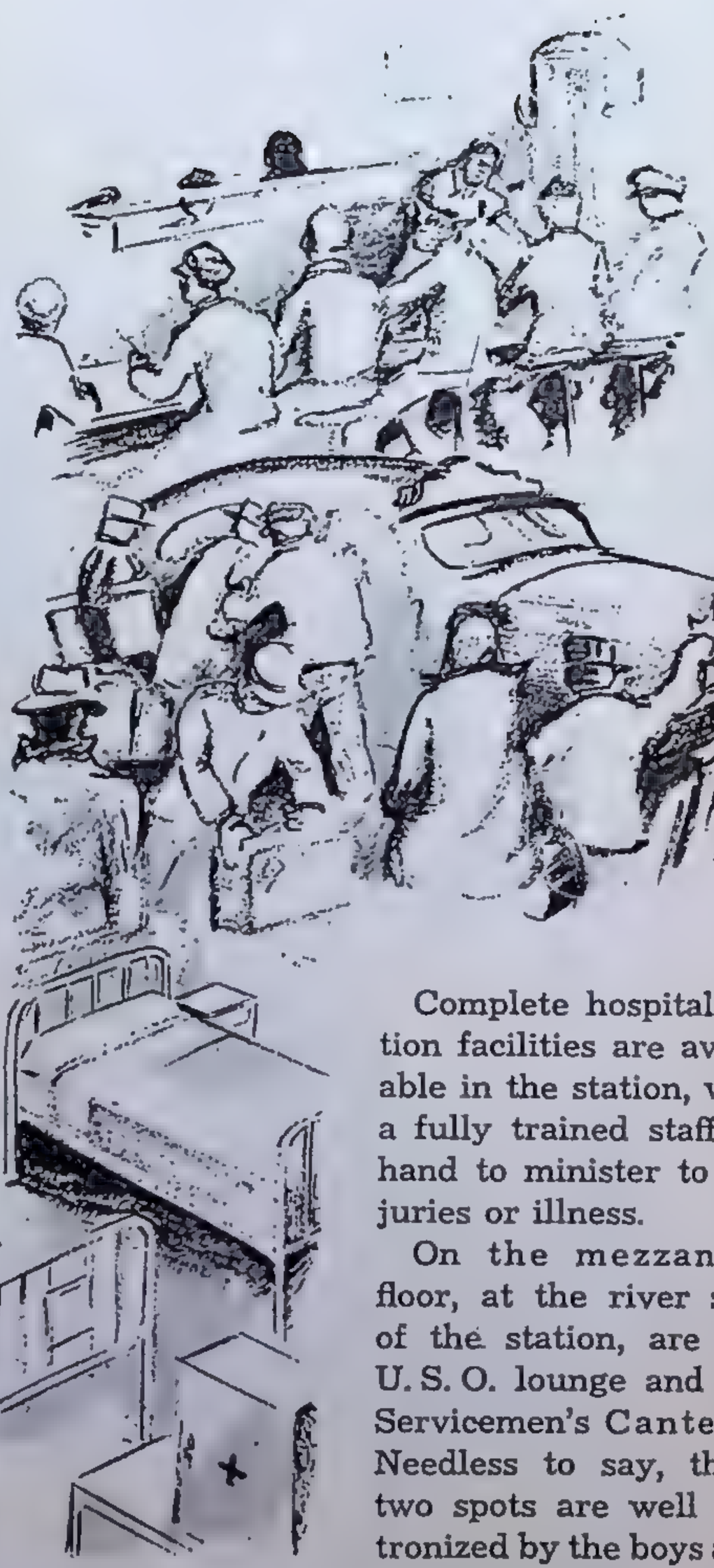
The Parmelee service also uses the cab tunnel for the operation of its limousine service. A passenger arriving at Union Station and departing from any other Chicago railroad station may have a coupon attached to his ticket at the time of purchase, entitling him to use the Parmelee service. A stranger need have no fears of getting lost or going to the wrong station to make connections, since the Parmelee agent takes care of all details.

An unusual feature of Union Station is the public-address system. This system is connected throughout the station, but is used only for paging service, and no trains are called. In fact, the passenger is "on his own" to see to it that he gets aboard his train, since at no time is any departing or arriving train called out, as is the prevalent practice in most stations.

The Union Station Company maintains a large steam plant, extending along the river from Taylor Street to Roosevelt Road. It consists of

four units capable of generating 20,000 horsepower at 200 pounds steam pressure, and is used for heating the terminal and postoffice buildings. The company also purchases electricity from the Commonwealth Edison Company at 12,000 volts alternating current, then, in the station's own plant, converts it to the required voltage and to direct current where necessary.

The station has its own police force and two fully equipped cells. These are used when prisoners come in by train. While the escorting deputies take a walk to stretch their legs, the prisoners are placed in the cells until departure of their next train.



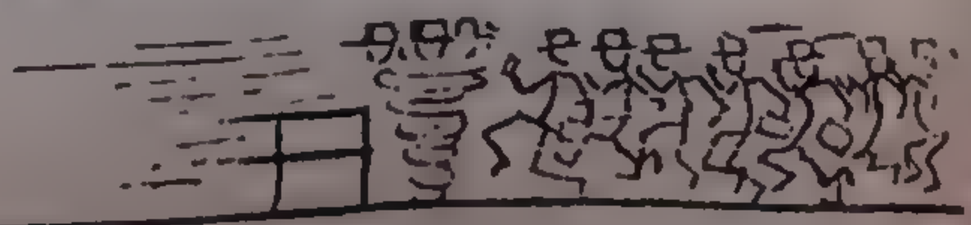
Complete hospitalization facilities are available in the station, with a fully trained staff on hand to minister to injuries or illness.

On the mezzanine floor, at the river side of the station, are the U. S. O. lounge and the Servicemen's Canteen. Needless to say, these two spots are well patronized by the boys and girls in uniform.

At Union Station, the gatemen are known as "ticket examiners." They inspect your tickets at the gate and see that you get on the proper train.

Looking at the throngs of service men and civilians passing through the station recently, a veteran ticket examiner smiled and said: "Do you know, just three years ago it was so lonesome in this station even at train time, I got to talking to myself? Seldom did I see anyone passing through the gates or in the depot. But, brother, not any more—no, sir, not any more!"

No, with 100,000 passengers, a staff of 1500 persons, and 250 trains moving in and out of Chicago Union Station every day, a ticket examiner or gateman is not lonesome any more.



Do you know timetables?

These lists of through-car service are from current timetables, and, by the cities and types of service, offer definite clues to the railroads from whose timetables they were taken. Each item represents one train. In what railroad's timetable is each of these trains listed? Each correct railroad name counts 5 points, and if you can also name the train give yourself a bonus of 3 points. A score of 35 is excellent; 20 is good. Answers are upside-down at the bottom of the quiz.

1

Sleeping car, Port Huron to Montreal (No. 94). Eight-section, drawing room, two compartments (in No. 16 at Toronto).

Parlor car, Chicago to Port Huron (No. 186), compartment. Port Huron to Toronto (No. 104).

Dining car, Chicago to Lansing.

Cafe parlor car, Port Huron to Toronto (No. 188).

Coach, Chicago to Toronto (reclining-seat deluxe).

2

Coaches, Chicago to Cincinnati. Buffet.

Dining service.

All seats reserved and assigned in advance. No extra charge.

3

Sleeping cars, between Montgomery and New Orleans. Compartments, drawing room and double bedrooms.

Dining car, Montgomery to New Orleans.

Coaches, between Montgomery and New Orleans.

4

Dormitory lounge car, Los Angeles-Williams-Chicago.

Tourist sleepers, Los Angeles-Williams-Chicago, Los Angeles-Williams-Kansas City, Oakland-Williams-Chicago. (Monday, Wednesday, Friday).

Motor bus, Williams to Grand Canyon. Grand Canyon to Williams.

Dining car, Los Angeles-Williams-Chicago.

Chair cars, Los Angeles-Williams-Chicago, Oakland-Williams-Chicago.

5

Dining car, coaches, Chicago to Ashland. Twelve-section, one-drawing-room sleeping car.

Sleeping car, Chicago to Watersmeet. Ten sections, one drawing room, two compartments. (In No. 211 to Monico, then No. 11 to Watersmeet.)

Parlor car, Chicago to Green Bay.

6

Standard sleepers, all Pullman, Portland to San Francisco. Sections, double bedrooms, drawing rooms.

Sections, double bedrooms, drawing rooms, compartments, Seattle to San Francisco.

Dining car for meal service. Tickets honored; ask agents.

7

Ten-section, one drawing room, two compartments, Kansas City to Jacksonville.

Air-conditioned lounge car, Kansas City to Birmingham.

Air-conditioned chair cars, Kansas City to Birmingham (women's and men's dressing rooms).

Air-conditioned dining cars, Birmingham to Atlanta.

Air-conditioned coaches, Birmingham to Jacksonville.

8

Sleeping cars, New York to Chicago, eight-section, Buffet. New York to Chicago, 10-section, two compartments, one drawing room. Washington to Chicago, 12-section, one drawing room (open 10 p. m.). Washington to Pittsburgh, eight-section, four double bedrooms and 10-section, three double bedrooms (open 10 p. m. until 8 a. m.)

Dining cars, New York to Washington, Pittsburgh to Chicago.

Coach buffet, New York to Chicago.

Reclining-seat coach, New York to Chicago.

The answers.

1. Canadian National-Grand Trunk. The Maple Leaf (Chicago section).
2. New York Central (Big Four). The James Whitcomb Riley.
3. Louisville & Nashville. The Crescent.
4. Santa Fe. The Scout.
5. Chicago & North Western. Ashland Limited.
6. Southern Pacific. The Cascade.
7. Frisco. Kansas City-Florida Special.
8. Baltimore & Ohio. The Shenandoah.

$375 in prizes!

TRAINS announces a competition with $375 in prizes for the best manuscripts on specific railroads. The object is to encourage new writers on railroad subjects and to stimulate interest in our railroads. Since the winners will be published in TRAINS, reader interest will be a prime factor in judging, and this means that emphasis should be on the present-day operations and plant of the railroad chosen, with history being given only to the extent necessary as background for the present-day picture. Any railroad anywhere, large or small, may be used as subject. Local color, personalities, geographic and industrial surroundings of the railroad all deserve inclusion in a good story of a railroad. The rules of the competition are:

1. The awards will be: First, $150; Second, $100; Third, $75; Fourth, $50. Tying awards or additional awards of $25 or more will be made if the judges deem other manuscripts worthy.

2. Each entry shall be devoted to a single railroad or railroad system and shall be a manuscript of from 3000 to 8000 words, exclusive of pictures, picture captions, lists and map data.

3. Manuscripts must be typewritten on 8½" x 11" unlined paper and double spaced, using only one side of the paper.

4. Manuscripts will be judged on completeness and accuracy of information, literary style, organization of material, photographic illustrations and supplemental material which will assist in an interesting presentation of the article. Entries submitted without accompanying photographs will be given full consideration.

5. All entries earning cash awards will become the property of the Kalmbach Publishing Co. Valuable photographs, maps, etc., receiving awards will be returned only after use and if their return is specifically requested. Return postage should be included in every case. The publisher cannot be responsible for safe return of entries.

6. Entries must be addressed: Competition Editor, TRAINS Magazine, 1027 N. Seventh Street, Milwaukee 3, Wis. Do not include with your entries subscription orders or any correspondence not pertaining to the competition.

7. All entries must be postmarked by midnight September 4, 1944 (Labor Day).

8. Employees of the Kalmbach Publishing Co. and their families are not eligible.

9. Judges: Editors of TRAINS and Samuel O. Dunn, Editor of *Railway Age*.

Railroads of Massachusetts

By Edward P. Sanderson

HER tapered smokestack belching great clouds of smoke and steam, her bright red paint rising in unseemly blisters along the trim lines of her boiler, a gallant little locomotive came to a screaming stop at the station in Lawrence, Mass., one day in 1848. She was the 10-ton, 35-horsepower *Antelope* of the Boston & Maine Railroad, and she had hauled a train over the 26 miles from Boston to Lawrence in exactly 26 minutes—the first mile-a-minute run in railroad history.

This feat of almost a century ago was admittedly a publicity stunt to "promote" the *Antelope*, custom-built and newly imported from England. The project was conceived by the B&M's canny superintendent, Edward Minot, who demonstrated his faith by riding the *Antelope* and feeding the fire box with great pine knots on her mad race for a record.

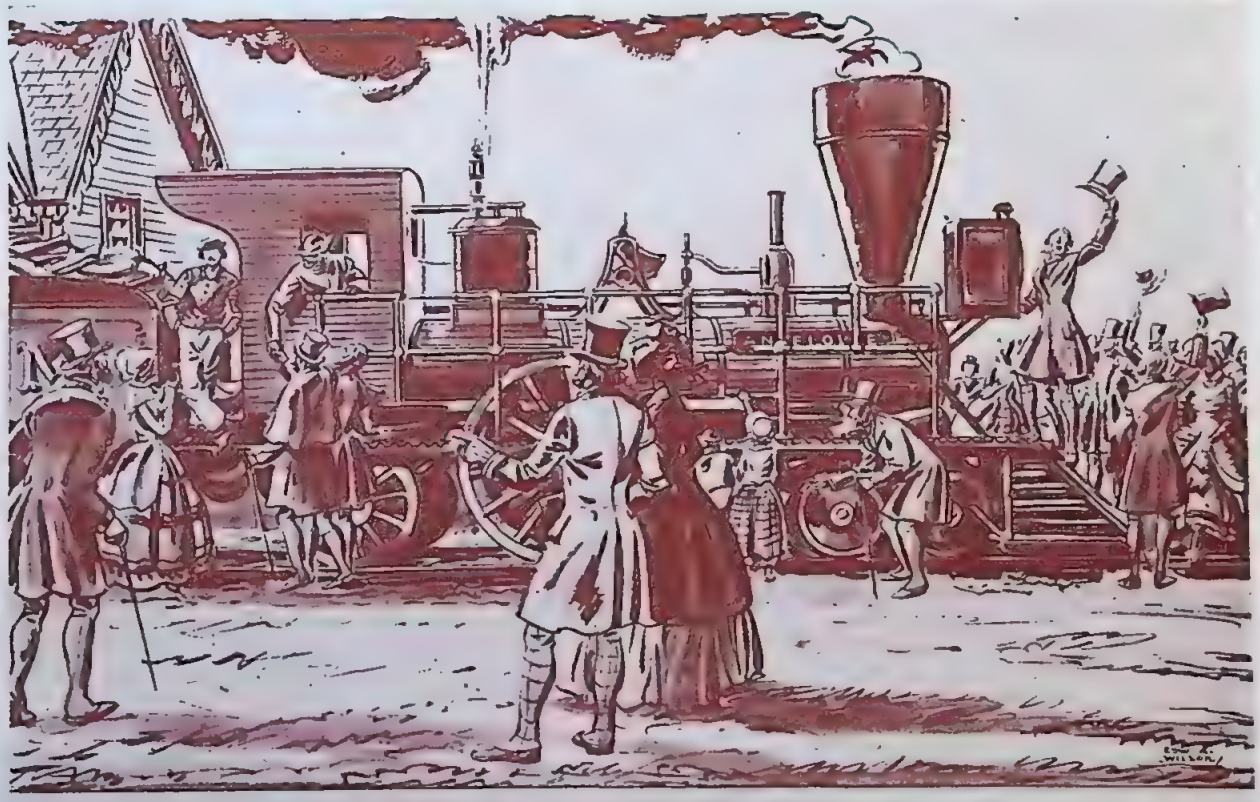
In the wood coach behind, it is recounted, terrified newspaper reporters and guest passengers sought the closest approximation to safety by flinging themselves prone on the floor, although a slightly more courageous fellow reported after one (and his only one!) glance through the window that the rear-view panorama was a cloud of soot, dust, feathers, flying parts of dismembered poultry and, most menacing of all, the strap-iron rails curling angrily upward as the speeding train fled on.

Chronicles differ as to the exact amount of time required to repair the roadbed after the historic excursion. Some say one week. Others insist on not less than a fortnight. In any event, the roadbed *was* repaired and still serves as part of the B&M's western route, while the run of the *Antelope* remains one of the most colorful incidents in the long and colorful history of railroading in Massachusetts.

The Boston & Maine today ranks among the three major railroad companies operating in the Bay State. Others are the Boston & Albany, a stepchild of the New York Central, and the New York, New Haven & Hartford, with its famous Shore Line to New York City. In addition, there are four smaller railroads: the Hoosac Tunnel & Wilmington (sometimes popularly called the "Hoot, Toot & Whistle"), a short, inconspicuous road that carries a little freight between Hoosac Tunnel, Mass., and Readsborough, Vt., just across the border; the electrically operated Grafton & Upton, which connects the B&A at North Grafton with the New Haven at Milford; the Union Freight, operating between the North and South stations in Boston and serving numerous warehouses and docks on a route that crosses the several drawbridges in the yards; the lower end of the Central Vermont, which is part of the Canadian National system; and the Fore River Railroad, owned by Bethlehem Steel. The seven public railroads are the consolidation of approximately 75 smaller companies, each of which was once a separate railroad.

Small state that it is, Massachusetts presents a virtual mesh of railroad lines—approximately 2000 miles of railroad in a state that is less than 200 miles from east to west and a bit more than 100 miles from north to south, including Martha's Vineyard Island in the Atlantic. Relics of the earlier multiplicity of small railroads, these lines sometimes parallel each other with extremely narrow intervening spaces, occasionally crisscross, and not infrequently follow a winding course alongside the ambling roads so characteristic of the New England countryside. The railroad lines radiate from Boston, "Hub of the Universe," much as English railroads lead to and from London.

Massachusetts has busy mainline railroads, like the New Haven's Shore Line to New York, and intimate short lines like the Hoosac Tunnel & Wilmington (Hoot, Toot & Whistle). Massachusetts has the third longest railroad tunnel in the United States and one of the world's busiest railroad stations. Massachusetts as a railroad state is well worth reading about.



BOSTON TO LAWRENCE — THE ANTELOPE — 26 MILES IN 26 MINUTES

Collection of C. L. Winey.

Roughly, the New Haven and its branches serve the southeastern section of the state, its Shore Line traveling south through Rhode Island to follow the Atlantic Seaboard to New York. The Boston & Albany runs east and west in the southern half of the state, crossing the Connecticut River and the hills which parallel the broad stream. The Boston & Maine, famed for its Connecticut River line which connects New York with the White Mountains in New Hampshire and with Montreal, has several other trunk lines through the state. To Massachusetts, the most important B&M line is that from Boston to Troy, N. Y., and Mechanicville, N. Y., carrying mostly freight. In the northern part of the state, it parallels the B&A's southern route.

Each of these railroads can claim more than 100 years of history. Railroading in Massachusetts actually began almost 150 years ago when the first two known tramways in the country were built in Boston. The first was constructed in 1795 for carrying brick; the second was built a few years later to haul gravel off Beacon Hill down to Charles Street on the Charles River, a quarter of a mile away. In 1826—one year before the Baltimore & Ohio was chartered—the Quincy Granite Railroad was laid from quarries in Quincy to wharves on the Neponset River four miles away. Granite was shipped over this road, then by boat around Boston to Charleston, for the building of the Bunker Hill Monument.

In 1831, Massachusetts got its first chartered common carrier, the Boston & Providence Railroad, which later was to become part of the consolidated New York, New Haven & Hartford. During its early days, the Boston & Providence used horses for motive power, and its passengers were accommodated in coaches that were little more than stagecoaches with flanged wheels. However, it grew up along with the rest of the railroads, and its locomotives were the first to use the brick arch in the fire box and the first to sport the diamond smokestack. Perhaps its most famous engine is the *Daniel Nason*, a 4-4-0 built in 1856 and still stout enough 80-odd years later to be exhibited at the New York World's Fair. In 1888 the Boston

& Providence was leased to the Old Colony, and both roads subsequently became part of the present New York, New Haven & Hartford.

The second railroad in the state was the Boston & Worcester, opened in 1835. This was the beginning of the present Boston & Albany, which came into being in 1867, uniting with the Western Railroad and later absorbing several smaller companies.

The name Boston & Maine first appears in Massachusetts history in 1841. In general, the present B&M system in the Bay State is made up of the original B&M, the Eastern, the Boston & Lowell, and the Fitchburg. The original B&M is the western route to Portland, Me.; the Eastern Railroad is the eastern route; the B&L ran up into Canada; and the Fitchburg reached from Boston to Troy, N. Y., through the Hoosac Tunnel.

Today the most modern trackage in Massachusetts lies along the B&M's line to New York State. The railroad has centralized traffic control with a third track part of the way. Through Hoosac Tunnel, the B&M has the only mainline electrification in the state. A through Pullman from Boston to Chicago follows this line on the *Minuteman*, so named because it passes through Concord and near Lexington. The only Diesel-powered passenger train on the B&M is the silver articulated *Flying Yankee*, which goes up to Portland, using the western route on some trips and the eastern route on others. Once a day it goes all the way up to Bangor, Me., over the Maine Central, which is closely allied with the B&M. The B&M's Boston-to-Montreal traffic, too, is important. There are three routings between these cities. One continues on the Rutland, one on the Central Vermont, and a third on the Canadian Pacific.

Most of the freight on the B&M's westbound trunk line goes to Mechanicville, N. Y., where it makes connection with the Delaware & Hudson, while the through passenger trains go to Troy, where there are connections for the Albany and beyond, via the New York Central. The freights and biggest passenger trains are hauled by some fine-looking Mountain types, while new 5400-horsepower freight Diesels are operating through Hoosac Tunnel without using the electric tunnel locomotives. When, nearly 20 years ago, the Boston & Maine saw the fine results produced by the Berkshire locomotives which had been especially built for the Boston & Albany, the B&M bought some, too. These B&M Berkshires have an unusual appearance with their outside-mounted Coffin feedwater heaters and are seen on many of the time freights. Most of the big passenger trains follow heavy Pacifics. Some interesting Moguls, Atlantics, and Eight-Wheelers do suburban work out of Boston.

The B&M is always up to something intriguing. It has named 28 of its new-

H. W. Pontin, Railroad Photographic Club, 47 Royal St., Allston, Mass.

The New Haven's streamlined Hudson locomotives (right) pull many of the heavy Boston-New York expresses, while others are handled by dual-service Diesel-electrics which work nights in freight service. The Boston & Maine Pacific (upper right) stays on its train while a three-unit electric takes over for the trip through Hoosac Tunnel.

est engines through contests in which the public took part. In the spring of 1941 it began painting its green passenger equipment red and, since the autumn of 1942, it has been converting its dingy green wayside stations into snappy combinations of ivory with a red trim.

Of the other two major railroads, the New Haven's Shore Line between Boston and New York sees the biggest share of passenger equipment that comes into the state. Especially noticeable are the streamlined Hudsons and coaches used in the through trains going from Pittsfield, Springfield, Worcester, and Boston, respectively, down to New York City. De luxe cars from the Pennsy find their way into Boston over this route. The New Haven has recently

acquired some dual-service road Diesels for use on the Shore Line, making it the first road in the state to use such power. The road also has one articulated Diesel train, the three-car *Comet*, which makes frequent trips between Boston and Providence.

The third great railroad, the Boston & Albany, is a busy line, particularly from the passenger standpoint, with its through traffic hauled by well proportioned Hudsons and heavy Pacifics. The Berkshire engines, originally developed by Lima Locomotive Works and first used on the B&A, handle the through freight, while commuter trains make use of light Pacifics and double-end suburban types. The road's ruling grade is on the western chain in the Berkshire Mountains. Along this route, through cars travel to the western reaches of the New York Central.

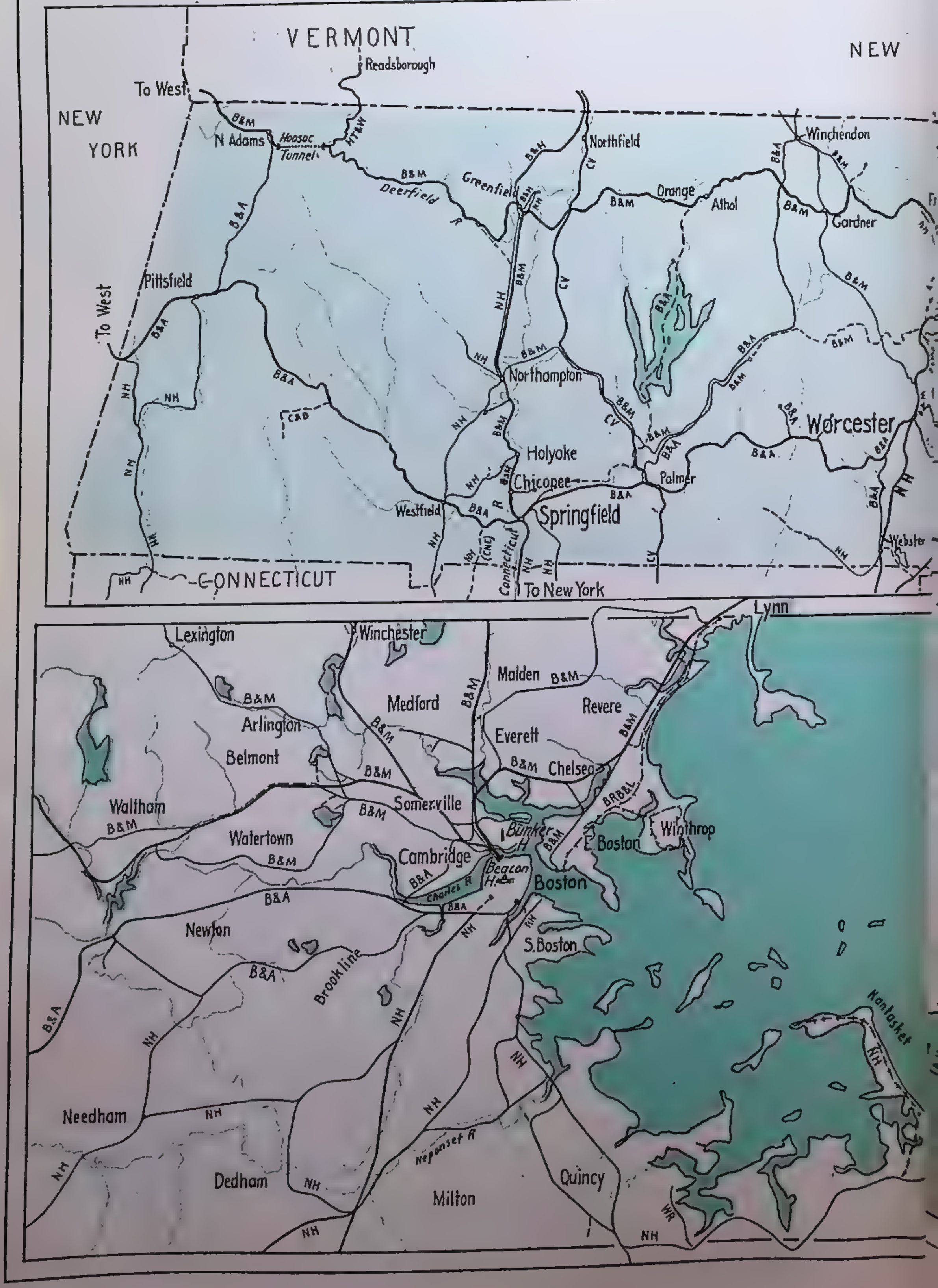
Terminals for these railroads in Boston are the North and the South stations. Like the railroads, the stations mark a consolidation, since originally each of the many Boston railroads had its own terminal—a confusing and highly inconvenient arrangement.

The North Station, used by the B&M, is unique in that it has a hotel and, upstairs, the Boston Garden, an enormous amphitheater which houses circuses, skiing and skating events and almost everything that requires a lot of space. The terminal, remodeled from an earlier station which originally rested on piles in the Charles River, has 22 stub tracks, connected by gates to the concourse. Opening off the concourse is the waiting room, where each settee is named after one of the B&M's trains. The general offices of the B&M are next door to the station.

The South Station, used by the B&A and New Haven, has no hotel nor Boston Garden, but its upstairs accommodates several offices, and a movie theater is situated at one end of the concourse. This station has 26 stub tracks. In its waiting room, settees are named for counties in southeastern Massachusetts. Beneath the concourse and upper-track level there was once a loop of track intended for electrified suburban service but never used.

Adjacent to both stations is the Boston Elevated Railway, which operates a system of trolley, bus, and third-rail lines, with free interchange between the three different forms of transportation. Some parts of the lines are elevated, some are on the surface, and still others are underground. From Boston to East Boston, the elevated travels through a tunnel under the harbor. Trolley subway tunnels are still being built, the newest having been completed in 1941. The Boston Elevated Railway is owned by stockholders, but is operated by public trustees.

Into the North and South stations come the


VERMONT
NEW
NEW YORK
To West
Readsborough
N Adams
Hoosac Tunnel
B&M
HT&W
B&A
Deerfield R
Greenfield
Northfield
CV
Orange
Athol
Winchendon
Gardner
Pittsfield
To West
NH
C&B
Northampton
Holyoke
Chicopee
Palmer
Worcester
Westfield
Springfield
Webster
CONNECTICUT
Connecticut R
To New York
Lynn
Lexington
Winchester
Malden
Medford
Revere
Everett
Chelsea
Arlington
Belmont
Waltham
Watertown
Somerville
Cambridge
Bunker H
Beacon H
Charles R
E. Boston
Winthrop
Boston
S. Boston
Newton
Brookline
Nantasket
Needham
Dedham
Neponset R
Milton
Quincy
BRB&L
WR

RAILROADS OF MASSACHUSETTS

Scale: 1" = 16 miles
(Inset, 1" = 4 miles)

Principal lines ——————

Other lines ——————

Abandoned – – – – –

Narrow gauge (abandoned) —·—·—·—

To Portland

HAMPSHIRE

Haverhill

Newburyport

Lawrence

Lowell

Rockport

Gloucester

Cape Ann

Beverly

Billerica

Ayer

Bedford

Concord

Lexington

Salem

Marblehead

Lynn

Massachusetts Bay

Boston

Quincy

Milford

Brockton

Mansfield

Attleboro

Taunton

Plymouth

Middleboro

Cape Cod

Provincetown

Cape Cod Canal

Providence

RHODE ISLAND

Fall River

New Bedford

Yarmouth

Hyannis

To New York

Newport

Buzzards Bay

Woods Hole

Vineyard Haven

Oak Bluffs

Edgartown

Martha's Vineyard

Nantucket

Linn H. Westcott.

hundreds of local and commuters' trains which, in the Boston area, gain an added importance because of the great number of historic spots within easy striking distance of the city. Like the railroads, the interurban lines originally were owned by a number of different companies, and it was not uncommon to change cars, companies and crews three or four times in a distance of 20 or 30 miles. The earlier interurbans were practically street cars, since few had heavy electrical equipment. Some people even wrote guidebooks for traveling by trolley between various New England points.

The New Haven alone has a large and complicated network of lines south of Boston, inherited from the Old Colony. Its commuter trains are made up of standard steel coaches, and they turn off on numerous branches, any one of which will take the traveler to a richly interesting spot.

Let us look at some of these branches.

Cape Cod is served by a line from Boston, much used by the good Bostonians whose tradition it was to spend the summer on the cape. Now, sadly enough, travel on the train has dwindled, and many a yellow and brown station has been torn down. Although the line extends all the way out on the spit of sand that is Cape Cod to Provincetown, 20-odd miles out at sea, with the ocean visible from both sides of the train, passenger service now runs only to Hyannis, and affiliated buses finish the trip. The Cape Cod Canal, cutting through the cape at its base, is crossed on a drawbridge which remains open until a train arrives.

Historic Plymouth, the oldest town in the state, is reached by a line that branches off at South Braintree, not far from Boston. Plymouth teems with commemorative tablets and historic houses rich in relics.

Another branch leaves the Shore Line at Mansfield and connects it with New Bedford, a small seaport famed for its great whaling ships in the past. Here the New Haven connects with boats of the New England Steamship Lines, which travel across Buzzards Bay to touch on the lower part of the cape at Woods Hole, where another New Haven branch comes down from Boston with through cars. The steamers also stop at Vineyard Haven and Oak Bluffs on Martha's Vineyard Island, then go on to the settlement of Nantucket on Nantucket Island. The natives of Nantucket are highly individualistic and, whenever they become disgusted with Massachusetts in general, they threaten to secede and join New York.

Both islands are great favorites with summer residents and, in the days before the war, they attracted many vacation tourists. Each once had a three-foot-gauge railroad. The Martha's Vineyard Railroad ran from Oak Bluffs to Edgartown, about five miles, and the Nantucket Railroad went from Nantucket across the island to Surfside, thence along the shore to Siaconset, a distance of about 10 miles in all.

The Boston & Albany runs frequent local service on its main line, which is four-track to Framingham, about 20 miles out of Boston. Light Pacifics take care of the longer local runs, and tank engines handle the suburban runs. The suburban cars are modern with arch roofs and vestibules without trap doors. They have straw seats, some of them painted gray. Of the characteristic red stone stations, most suburban ones have well kept shrubs and lawns, creating an attractive picture. The B&A's Grand Junction branch is essentially a freight line, connecting the company's docks in East Boston with a yard adjacent to the main line. The B&M's docks are next to those of the B&A; the New Haven has its docks across the harbor in South Boston.

Historic Concord and Lexington are served by the B&M, the former by frequent service on the main line to the west and the latter by a commuting branch. The B&M possesses the most diverse array of commuting cars among the railroads serving Boston. The road has some

Optional routes.

For the benefit of those who must travel but who cannot get accommodations by their usual route, TRAINS each month will print a brief listing and survey of available routes between larger cities.

New York and Montreal:

New Haven - Boston & Maine - Central Vermont —Via New Haven, Hartford, Springfield, White River Junction. Overnight service with sleeping cars (also from and to Washington). Daily-except-Sunday day train.

New York Central - Delaware & Hudson—Via Albany and the west shore of Lake Champlain. One day and two night trains, one of the latter all-Pullman. Somewhat the fastest route.

New York Central—Via Albany, Utica and the Adirondacks. One day train and one night train. No sleeper. Indirect and slowest route.

New York Central - Rutland—Via Albany, Rutland, Burlington, and the east shore of Lake Champlain. One day train and one night train with sleeper.

H. F. Harvey, 65 Olean St., Worcester, Mass.

Providence-Worcester local.

The New Haven's Providence-Worcester line is not one of the heavily traveled railroad arteries, and this local, making one round trip a day, suffices to handle the express and passenger business.

fairly modern arch-roof suburban cars, but it has a great many more open-platform wood cars which are a lot of fun to ride in because they have a window in each end, affording a superior view of the line. Besides, when going from one car to another, the passenger is right next to the scenery instead of cooped up in a vestibule.

Similarly constructed cars, but with vestibules, also see local service. They probably were built originally for service on through trains, but were largely switched to local service when steel cars were introduced. Some of these cars have stained-glass windows and numbered seats, indicating that they once were something pretty special. The wood-vestibule cars are still used for extras on the through trains, and it is not unusual to see a modern streamlined coach going along with an open-platform wood combine coupled right behind it.

During the summer of 1940 the B&M bought 100-odd steel suburban cars from Pennsy, keeping the cars in their original red instead of repainting them green. The following spring the B&M astounded the populace by painting all its own green equipment to match. The Pennsy cars were not too popular at first because they had nothing on which to hang coats; but this has been remedied by installing hooks in all of them. The cars also are being painted inside with a light paint. The latest acquisition took place just before Christmas, 1942, in the form of 18 open-platform steel cars from the Lackawanna. The handsome exterior lines of these cars are enhanced still further by stained-glass windows.

Commuters' trains come into Boston from all the four main lines: the Troy line; the line out from Lowell; the eastern route, with its several heavily traveled commuter branches; and the western route, scene of the *Antelope's* famous mile-a-minute run.

Marblehead, annually the scene of big yacht races, and Gloucester are reached by branches of the eastern route. The Gloucester branch goes through Gloucester, center of the fishing industry, to Rockport at the very tip of Cape Ann, where the natural charm of the vicinity

B&M Pacific 3717, named "Old North Bridge," just east of Fitchburg station.

Dana D. Goodwin, 356 Main St., Fitchburg, Mass.

H. W. Pontin, Railroad Photographic Cl.

Namesake of the Berkshire class.

The Boston & Albany gave the class name Berkshire to 2-8-4 locomotives. The wheel arrangement was developed in 1924 by the Lima Locomotive Works and, after testing the sample, B&A ordered its first lot, numbered in the 1400's. These higher-horsepower locomotives were promptly dubbed "Berkshire" because of their efficiency in producing freight ton-miles on the B&A's main line across the Berkshires between Springfield and Albany. No. 1420 is shown (above) near Boston and (on opposite page) heading west out of Pittsfield.

attracts many summer residents and artists. Since Cape Ann is made of granite, it naturally has quarries. Once, too, it had its own railroad —the Cape Anne Granite line, which led from the quarries to docks at the nearby shore.

At one time a two-foot-gauge railroad, the Billerica & Bedford, ran out toward Lowell from the Boston direction, its route corresponding to the present B&M branch between the two places. It was built in 1878 as the first two-foot-gauge line in the United States and had operated a little over six months when it went bankrupt and was abandoned. The B&B had two engines, the *Puck* and the *Ariel,* and ran passenger service over its eight-odd miles.

A tear should be shed for the unique 13-mile commuters' railroad which recently passed out of existence. It was the Boston, Revere Beach & Lynn, more familiarly known as the "Narrow Gauge" because of the three feet between the rails. When it was started in 1875, the railroad was steam-operated, changing to electricity in 1928. With an eye to publicity, the road on July 4, 1904, staged a head-on collision between two old locomotives at Revere Beach. The BRB&L had three notable "firsts": telephone dispatching, automatic block signals on a steam road, and use of the Walschaert valve gear on its locomotives. At the time of its demise in 1940, the BRB&L trains connected at East Boston with company ferries which plied the harbor between Boston and East Boston. The automobile spelled doom for the BRB&L and, with the construction of the summer vehicular tunnel under the harbor, its fate was sealed.

On June 21, 1940, Massachusetts got its first glimpse of the *East Wind,* a de luxe coach train running from Washington, D. C., to Bangor, Me. Previously on this run, one traveled through Massachusetts in the wee hours of the morning, but this yellow and silver beauty was a daylight train and so proved popular from the outset. The three-car Diesels, *Flying Yankee* and *Comet,* can take credit as the first trains in the state designed for eye-appeal to the public, but the *East Wind* had them both beaten with its 12 or more cars hauled by honest steam power. The train operated for three summers with such success that reservations had to be turned down at the peak of the season. Since it was almost entirely a vacationists' train, it has been suspended for the duration.

Massachusetts has much to offer the casual railroad traveler as well as the genuine railfan. For the former, the Berkshire Mountains are perhaps the most scenic part of the state, and a ride through them, by either B&A or B&M, is a worthwhile experience. The B&M's route through here is lower by 600 feet because of its electrified 4.75-mile tunnel through Hoosac Mountain [Feb. '42 TRAINS]. A central shaft for ventilation reaches from the middle of the tunnel up to the open air beside a secluded little road, entirely out of sight from the railroad. A low building houses fan machinery, and the smoke from the towed steam engines shoots out of a low, box-like chimney. There is a queer sensation in seeing signs which say "No Trespassing—Boston & Maine Railroad" when there is nothing in sight that looks at all like a railroad facility.

Here, too, is a memento (and a queer one!) of earlier days of railroading. It graces the East Portal, where the bore originally was started a few yards to the left of the present one. Work began with a drilling machine that operated something like a rotary snowplow. After about two feet of drilling, however, the machine broke down, so the workmen abandoned it and started in with hand drills.

Another relic of things past is to be found along the right of way of the Hoosac Tunnel & Wilmington, where it points its humble track north along the Deerfield River. The "Hoot Toot & Whistle," which now has a Mogul and a Ten-Wheeler, once was a narrow-gauge line. Today the remains of a tiny narrow-gauge engine lie abandoned in the shallow water of the river, close to shore—that is, unless it has been turned in for scrap!

Gregory R. Waring, P. O. Box 39, Uphams Corners Sta., Boston, Mass.

Adventure in Mexico

How about coming along for a little adventuring on the high iron down Mexico way? There's plenty of opportunity for it, particularly in the more than 1500 miles of narrow-gauge operated by the National Railways of Mexico to many of the more remote sections of the land. Nothing dangerous about it at all, of course, but plenty of chance for all kinds of novelty centering in the routes that start from large, populous Mexico City.

Those were the alluring enticements, at any rate, that came to my attention during a vacation last November in Mexico City—so alluring that I used my credentials as a newspaper reporter of St. Louis, Mo., to seek permission from the big system to ride in the engine of one of its narrow-gauge lines. Much to my surprise, the request was granted.

Required to make a selection of route, I took a quick look at a map and decided to ride the

by Wayne Leeman.
Photographs by the author

46 miles to Toluca on the three-foot line that eventually reaches a town called Acambaro. Here's a rail trip seldom taken by the average tourist. Except to Toluca, the whole route goes nowhere that an alternate standard-gauge division doesn't serve better. Yet it really is steeped in historical significance, abounds with scenery, and provides a perfect setting to compare the *modus operandi* of this railroad with practices in the United States.

Armed with a passport of sorts, I showed up at Mexico City's Buenavista station, boarded the pert, squat, articulated No. 368, and said "*buenos dios*" to Fireman Giromino Marin and Engineer Rafael Estrada. That was shortly before the train left at 10:20 a. m. Three hours, 16 minutes and about 3500 sharp turns later, I said "*buenos tardes*" to the same men and left them at the end of their run in Toluca.

In the intervening time, I had had plenty of good wholesome amateur railroading sport in riding both inside the cab and on top of the tender. I could have ridden on the front of the engine, but it seemed that my objectives could best be served where I was. Anyway, I knew from previous experience that there is no place of more limited opportunity for railroad pictures than the engine itself.

The two positions I did occupy were good enough to take inventory of the stockily built, fast-talking Marin. He had been to the United States on an extended tour, but he hadn't cared much for it at all. Instead, he remarked, he was perfectly satisfied with twisting an oil valve on the 368 in return for the 22 *pesos* the job pays per day. That amount is equivalent to about $4.59 American.

To say all this, Marin combined the better parts of Spanish and English to come forth with a conglomerate language that would have amazed a Mexican, startled an American, and left an expert linguist hanging on the ropes.

Engineer Estrada meanwhile contented himself with crooning soft words in Spanish to his Alco 2-6-6-2 oil-burner, wheedling the low-built machine off the plateau of Mexico City over the Sierra Madre Range into the Valley of Toluca.

So far as operation of the engine itself was concerned, not much novelty was involved. Rides in fast freight and steam engines in America's Middle West have been more impressive to me. The fact is, an American engine in the hands of a competent Mexican crew seems to work about the same as it would in any other country. Firemen on these runs even follow the American practice of pouring sand into their fire boxes to clean the flues—as I noted from the heavy shower that struck me in the face at one point.

Performance ably demonstrated that the low-built 368 really was tailored for that country. Not once did the drivers slip on grades that walked right up the sides of the mountain terrain. (Because my Spanish vocabulary failed to include the words "ruling grade" and "percentage," I have no statistics to offer on the rate of climb.) To set the wheels in motion, so to speak, Estrada merely opened the throttle and the Mallet took off without a whimper to keep going on hills or level without apparent difference. With engine drivers which I estimated at from 36 to 48 inches, and a schedule ranking with some of the fast-

Fireman Giromino Marin (above) pulls the chain for the water system at Dos Rios. With No. 368 all set for her daily trip over the mountains, the crew engages in a little conversation (below). Fireman Marin is doing the gesturing.

er oxen runs of the country, the output was not amazing, but it was consistent.

Mexico's first railroad was built in 1854 from Mexico City to suburban Guadalupe. Total mileage is now over 22,000.

The slowness, though, gave me an excellent chance to do a little observing of the physical aspects of the railroad property. Block signals for the single-track system were nonexistent. Orders were passed up by station operators, and one of these orders, much to my surprise, concerned my presence on the engine. That was for the benefit of the train's conductor, to whom no one had bothered to explain that he was to have a nonrevenue passenger on top of the tender.

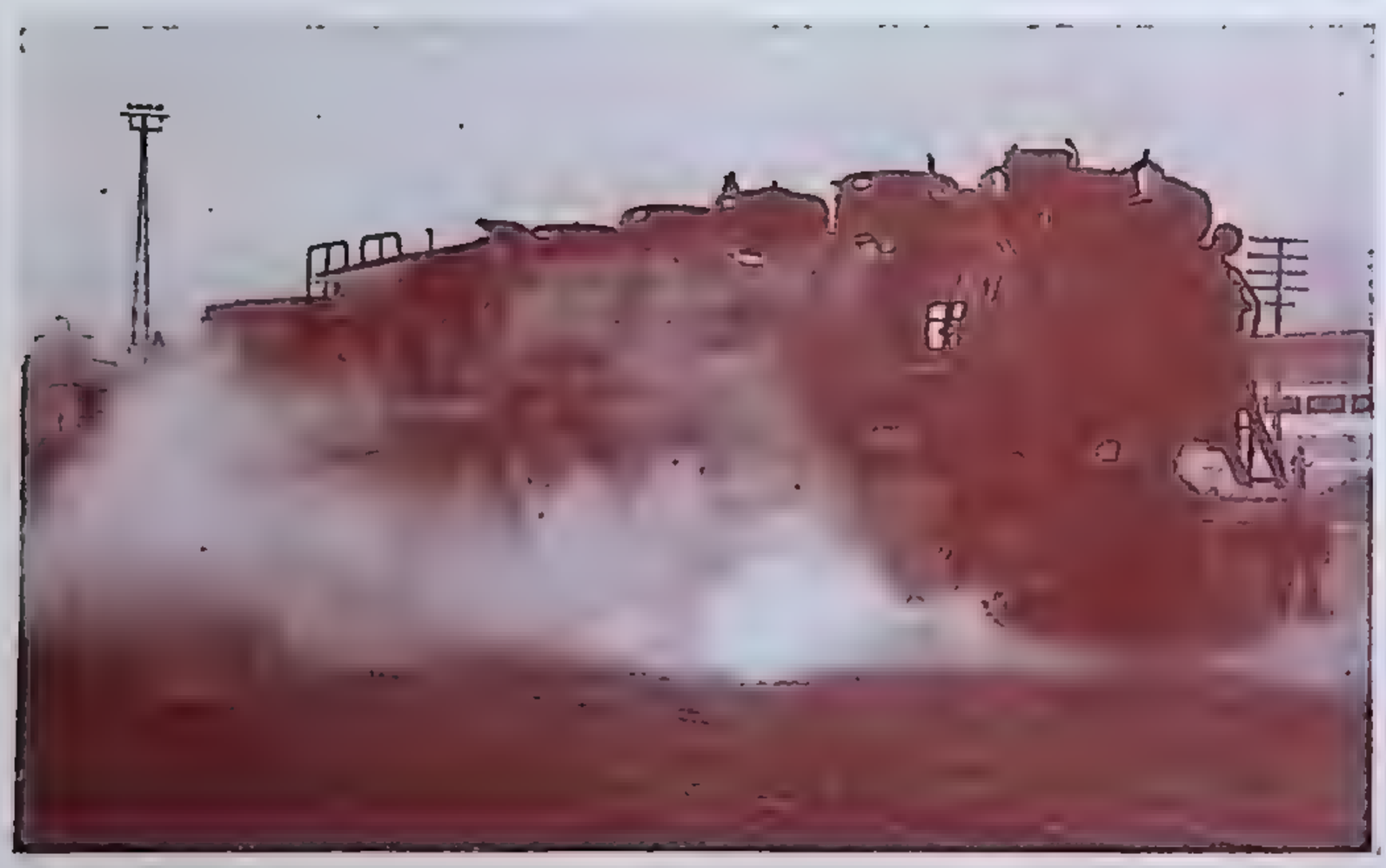
It wasn't until we reached a small mountain town called Dos Rios (Two Rivers) that he spied me there. His reaction was to telegraph the division superintendent in Mexico City as to what went on. Two stations later the order told him. Under the standard heading of "*Seguridad Antes Todo*" (meaning "safety above all"), the blue flimsy gave salutations to the crew, then followed with my name plus the assurance in Spanish that everything was still all right with the operating department. When Marin and Estrada read it, both laughed merrily. I tried to get Estrada to give the order to me, but he wouldn't. What he wanted with it I don't know.

The whereabouts of the company's rolling stock (at least on the day of my ride) is something else I don't know. I kept tab at the 19 stations we passed, failing to observe a freight car of any kind. The same thing was true for narrow-gauge cars for freight in Mexico City. The only plausible explanation is that commodities move over standard-gauge lines of the area, or else there isn't any traffic of that kind.

If freight cars were nonexistent, there were passenger cars available for inspection, conveniently located right behind the engine. Of the six that made up the consist of this particular train, two were for express and four were open-vestibule jobs for passengers.

In contrast to American custom, which has different classes of service but not always labeled as such, three of the cars, small with four-wheeled trucks, were marked "*segunda*" to signify second class. To occupy a seat in one, or to stand, as the case might be on week-days, costs about 20 cents in American money. The other car was marked "*primera*" for first-class

Trackage at Buenavista station in Mexico City is mixed gauge. The engine at left is No. 368.



travel. Those riding there had paid approximately twice as much. First class generally costs double the second-class rate. A round-trip ticket between the two points, 92 miles in all, costs 31 cents for second class and 52 cents for first. Even these rates are reduced for week-end excursions. Of course, certain refinements which are standard on most American lines are not thrown in with this range of admission. Air-conditioning on the three daily trains each way is by raising and lowering the windows, and there are no diners. Equipment, except motive power, is old.

The lack of diners, as I observed, does not mean that passengers want for food. The old Mexican custom of feeding at trackside takes care of that. As I saw it, the long wail of the train whistle was the signal for native wives of both large and small towns to make a hasty exit from their smoke-filled kitchens, carrying as large an assortment as possible of hot or cold plates of food. The train would hardly have time to grind to a halt before the hungry passengers indicated their needs by the simple expedient of throwing up a car window and calling for what they wanted. Black-shawled women scrambled to pass up dishes of food still steaming from the heat of the charcoal braziers which they carried along. Judging from the number of windows that flew up for every stop, the average traveler on the line must have had a tremendous appetite.

If eating was what the passenger wanted, I observed he had the opportunity for it with protection provided by the Mexican Army. Sharing the front of the first second-class car was a contingent of five soldiers, which was not unusual for the entire rail system. Troops ride all regularly scheduled trains in Mexico, a practice made necessary by the disastrous bandit raids of former days and continued now as a precaution.

The mountain barrier between Mexico City and Toluca at one time must have been the locale of plenty of trouble. Not satisfied with the train guard, the army also provides soldiers for trackside posts, and I saw several of them at spots miles from nowhere. One of them, I remember, stood in rather melancholy loneliness near the summit of our climb, a point reached after about 26 miles of steady pull by the engine.

Maybe my recollection of things in that particular stretch was sharpened by what happened when I slip-

All aboard at Tacuba (left). Above, No. 368 gets up steam.

ped away from the engine for a brief ride in the first coach. This was a mistake, because my engineer friend picked that particular moment to make up a little time on the downgrade. Unfortunately, his unexpected burst of speed coincided with a series of reverse curves, which, in turn, coincided with my position in the coach aisle just inches from anything to grab hold of. The result was inevitable. I felt myself easing to the side. The process hastened. My balance was swept away. With a final plunge I landed in the lap of a pretty *senorita,* who responded with a squeal of anguish that bettered any previous effort of the locomotive whistle.

All I could do was to murmur an inconclusive *"perdoname"* in a feeble attempt to justify the situation. By this time, some of the train crew who were seated in the coach had seen my plight and were laughing heartily. But the worst was yet to come. Blushing with unaccustomed vigor, I extricated myself from the girl's lap just as the train gave another lurch that sent me back into her arms. Her surprise began to swing to anger, and I was as glad as she when I finally got up and away. From then on, I stayed in the engine.

The best view I had of the people who rode the train was at suburban Tacuba station, on the outskirts of Mexico City five miles from Buenavista station. A considerable crowd was waiting at Tacuba, and all made a mad scramble to snatch the few remaining seats when the train stopped. Of varying dress—from average businessmen in regular suits to native women with shawls—many carried a sack, bag, or basket. A few took along a chicken or two, snugly tucked under an arm.

From then on, as the train penetrated the mountain reaches, it brought to view many a charming *senorita* doing her wash in one of the small streams tumbling along beside the tracks. Burro drivers, who had found the right of way a convenient place for their traffic, drove their small pack-animals a safe distance away to prevent the uproar from disturbing their charges. Squat adobe-type one-room houses made a front yard out of the railroad and its adjoining ground. From many, the smoke of cooking fires poured out through doors and windows without benefit of flue or chimney.

And so it went . . . a panorama of the life of another country in a section only a few miles, but many years, removed from the refinements of a modern and much more complicated Mexican life.

Impressed with the sights as they unfolded, I could only reflect on the railroad's history and speculate on what the traffic would have been if the dreams of the American promoter who started the route had been realized. The year was 1880 and the promoter was General William J. Palmer, a great advocate of narrow-gauge construction but better known in American railroad history as the builder of the Denver & Rio Grande. He and an associate named Sullivan obtained a concession for a network of lines to be known as the Mexican National Route. Of particular interest here was the section, in narrow gauge, that was to run from Mexico City through Toluca, Acambaro, Celaya, San Luis Potosi, Saltillo, and Monterrey to the border city of Laredo.

Piece by piece, a rail line was run through these points, the section from Mexico City to Toluca being completed about a year after the concession was granted. But something happened to Palmer's scheme to make the road part of a transcontinental system. Financial difficulties beset his Mexican enterprise, and in 1887 control of the lines passed to the English bondholders. That didn't last and in 1902, as part of a second reorganization, control shifted to an American company, the National Railroad Company of Mexico, incorporated in Utah. The Utah concern continued work of converting the main line south from Laredo into standard gauge, a task of no small dimensions. The job was finished in 1903. Six years later the Mexican National merged with the National Railways of Mexico in the corporate structure which exists today.

Travelers taking the Missouri Pacific to Laredo and southward still go through Monterrey, Saltillo, and San Luis Potosi, but when they reach Empalme Escobe, 609 miles south of the border, trains turn southeast instead of southwest as General Palmer intended. Apparently the route now used is less mountainous and hence easier on the operating expenses.

What happened to the Toluca way of reaching Mexico City has not been recorded in any easily obtainable treatise written in English. While it was rather a tough break for Toluca, the city has met the test. The latest timetable of the present system says of the city: "*Es sin dispua una de las principales ciudades de nuestro pais* (it is without dispute one of the principal cities of our country)." And it stays that way without benefit of the through trains from America.

Short Lines

★ A photo story.

Pictures by D. W. Yungmeyer.

THE independent shortline railroad is a vanishing American institution, an institution which in its day was remarkably interwoven with the social and economic life of the small towns and rural areas. With its secondhand wood coaches and nondescript motive power, the typical shortline passenger train (when the line runs one) arouses a nostalgic feeling which gives short lines a more ardent "fan" following than many of the large, modern, and less individualistic Class 1 railroads.

As Archie Roberston puts it in his book, *Slow Train to Yesterday,* which will be published by Houghton Mifflin, "We do not ride them, or write about them, to make fun of their obsolete equipment and generally old-fashioned way. . . . Any operating railroad, however small, is a living thing and not a curio. Its financial and personal roots go deep into local history and pride. It is almost true that the smaller the railroad, the more important it seems as an institution. Sentiment and dollars and cents get all scrambled up in a most delightful way, and it is for the spiritual qualities which they represent that many small, obsolete trains are passionately defended when their abandonment is proposed. Perhaps the sense of the community is so precious to us that any institution which symbolizes it takes on a value greater than the Interstate Commerce Commission will allow."

Just what is a short line? The American Short Line Railroad Association defines it as a railroad that originates the majority of the traffic it handles, whereas a trunk line is more of a bridge connecting other railroads. The popular conception of a short line, however, is somewhat different. The Interstate Commerce Commission classifies railroads into four groups: Class 1, with operating revenues of more than $1,000,000 a year; Class 2, with operating revenues of between $100,000 and $1,000,000; Class 3, with less than $100,000 operating revenues; and a fourth group in which are the obscure "circular railroads," those which are so small they are not required to file formal reports. They are merely circularized occasionally to obtain the barest of vital statistics. The true short lines, according to the popular notion, fall into the last two groups. And yet the popular definition of a short line should not be based entirely upon amount of revenue. It is a matter of spirit which is hard to put into statistics. A

Wood-burning locomotive on a Florida short line.

Last wood-burner of the 76-mile Florida railroad, Live Oak, Perry & Gulf, is this "cabbage head," No. 102. The "cabbage head" type of stack is rapidly disappearing and soon will be just a memory. No. 102 was built in 1910; the road, in 1903.

reader once wrote TRAINS to say that he liked shortline articles such as the one about Western Pacific! The WP has 1207 miles of route and earns a [prewar] operating revenue of 17 million dollars. The great Rio Grande system belongs to the American Short Line Railroad Association, and well it might, for much traffic originates on its narrow-gauge branches in the Colorado mountains and the homey, friendly traditions of yesterday's local train are well preserved.

While the greatest number of bona-fide independent short lines are in Georgia, you can find shortline atmosphere in your own back yard anywhere in the country. It may be a meandering branch of a large system, scheduling a mixed train Mondays, Wednesdays, and Fridays, or it may be a six-mile streak of bumping 60-pound rails on rather oldish ties, listed in the *Official Guide* as "irregular passenger service." When you ask for a ticket the station agent will likely as not try to dissuade you by telling how much better service the bus line gives. The typical short line is no longer a passenger-carrying in-

At 31 miles per day, this train should last forever.

Speeding over the 7.7 miles of Louisville, New Albany & Corydon track in Indiana four times daily (two round trips) is this snappy consist of No. 5, painted a Southern green, and a combination car, painted a Pennsy red. Above, LNA&C No. 9.

Albany & Northern. Built in 1890 at Rome, N. Y., No. 10 (above) now travels the 35-odd miles of the Albany & Northern Railway (formerly Georgia, Southwestern & Gulf) in Georgia.

Detroit & Mackinac.

Although through trains with sleeping cars travel some sections of Detroit & Mackinac track, the road still probably ranks among the short lines. Incorporated in 1894, the D&M by purchase and merger now operates a total of 242 miles of line. Two views of the road's No. 116 are shown below, one as she stands at Omer, Mich., and the other as she leads an extra north out of Omer.

stitution, even when it offers accommodations for those hardy souls who may insist upon riding. The short line is now a part of the system by which carload freight is delivered to any part of the United States, whether it be a busy factory on the main line or a little one-car-a-week farmers' supply warehouse six miles up-country from the junction.

The survival of many a short line is a tribute to the versatility of its operators, men who may double at everything from locomotive engineer to section man. With income counted in four figures, real ingenuity is necessary to pay wages, fuel bills, taxes, and repairs and still come out with a penny or two over at the end of the year. The refinements of depreciation, fixed charges, contingent interest, and so forth mean nothing to a real short line. It is simply how much cash comes in and how much goes out. Perhaps this is one reason why many an independent short line keeps going while comparable big railroad branches are aban-

doned. The fine points of standard railroad accounting would have placed most of the independents in the obituary column years ago.

But the bigger reason why the small road keeps its wheels turning is simply its intense desire for life. The Class 1 railroad can chop off an unprofitable feeder and still live. The short line has no alternative but to keep going somehow or close up shop completely. The friendly local contacts of the men who own and run the short lines mean more business over their rails. The obviously lean treasuries mean relaxation of union full-crew rules. The motive power and rolling stock, secondhand though it may be, almost invariably represents much ingenuity in local repairs and alterations. The old McQueen Eight-Wheeler is a panting symbol of the saying that a locomotive never wears out but only gets obsolete. Passengers, when there are any, invariably ride in a combination vehicle that started as box car, caboose, or coach, but now serves as all three, carrying l. c. l. freight, express, the train crew, and perhaps some mail.

The short lines or mixed-train branches in your neighborhood are opportunity for fascinating one-day trips. And in spite of the gas and tire shortage you won't be unpatriotically overcrowding the facilities.

Sumter & Choctaw.

Vest-pocket edition of a 2-8-2 is the Sumter & Choctaw No. 105 (lower picture), which hauls logs over the road's 22.66 miles in Alabama. Shown at Glenville, Ga., is No. 105 of the 23-mile Collins & Glenville line in Georgia, abandoned in 1941.

Gold Dust Twins

SOUTHERN PACIFIC has recently put into service 10 new locomotives of the same general type as its earlier general-service locomotives, the class made famous on the *Daylight*. But these locomotives no longer sport the bright orange and red paint scheme, for, in tune with their war work, they are painted black. At the same time that it built these locomotives for SP, Lima Locomotive Works also built six almost identical engines for Western Pacific. This grouping of orders for the two competitive roads was at the suggestion of the War Production Board, so as to save engineering and patternmaking time.

The SP engines are road class GS-6. The GS-3, GS-4, and GS-5 locomotives have 80-inch drivers, while the new locomotives have 73½-inch drivers like the earlier GS-1's and GS-2's. The engines with 80-inch drivers have always been used in both passenger and freight service, in spite of their bright decorations, but the WPB considers 73½-inch-driver jobs more suitable for freight service. That explains the choice of the smaller drive wheels for the "war babies." One other important difference in design between these and prewar general-service locomotives is a 260-pound instead of 300-pound boiler pressure. Thus, in spite of the smaller drivers, the tractive effort is actually smaller.

Specifications:

	SP GS-6	WP 481
Road classification	4460-4463	481-486
Road numbers	64,200*	64,200*
Tractive effort, pounds	27 x 30	27 x 30
Cylinder diameter and stroke, inches	73½	73½
Driver diameter, inches	283,200	280,950
Weight on drivers, pounds	72,700	73,650
Weight on pilot truck, pounds	112,500	111,600
Weight on trailing truck, pounds	468,400	466,100
Weight of engine, pounds	317,800	316,250
Weight of tender, two-thirds load	260	260
Steam pressure, pounds	90.2	90.2
Grate area, square feet	4852	4922
Evaporative heating surface, square feet	2086	2086
Superheater, square feet	23,300	23,300
Tender capacity: Gallons of water	6080	6000
Gallons of fuel		

* With booster: SP, 75,500 pounds; WP, 75,500 pounds.

Anti-Horse-Bolter

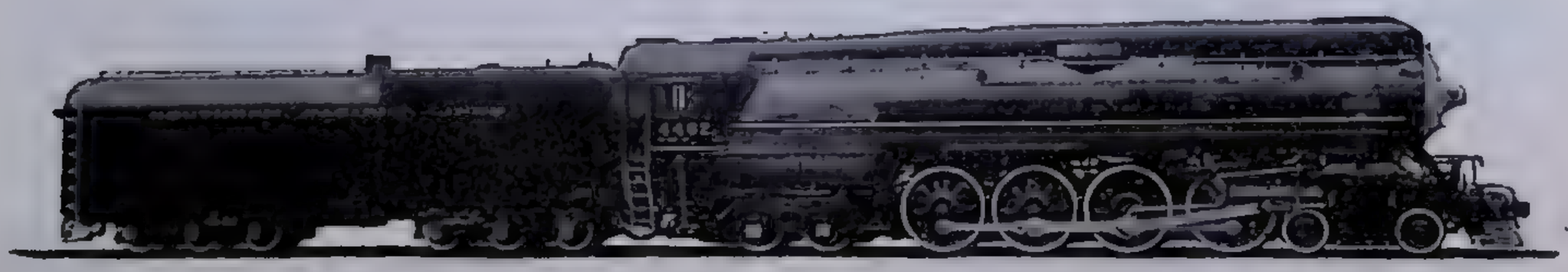
★ Locomotive disguised as street car to pacify skittish equines.

LARRY SAGLE, of the public-relations office of the Baltimore & Ohio, brought this picture into TRAINS' office. The staff tried to figure it out and couldn't, so Sagle explained:

"When I was a boy I saw this engine operating on Pratt Street, in Baltimore. It was in the days before automobiles, and the heavy traffic, both night and day, consisted of horse-drawn vehicles. The horses were accustomed to street cars, but it was found that a locomotive coming down the street was too much for the horses. Therefore, this locomotive, scheduled for plenty of use around the wharves and among the horse traffic, was equipped with a muffled exhaust and a cab which covered the entire engine. This made it look, so it was thought, like a street car to the horses. And they actually did less bolting after it made its reappearance in the new garb."

Locomotive 316, an 0-6-0T, was built in 1865, and after remodeling was known as a Class D-1. It had 19½" x 22" cylinders, 44" drivers, weighed 97,000 pounds in working order, and had a tractive effort of 22,624 pounds. It had the old-type Stephenson valve motion, with eccentrics on the axle. No. 316 was scrapped some years ago.

60 LIMA 4-8-4's now serve The Southern Pacific

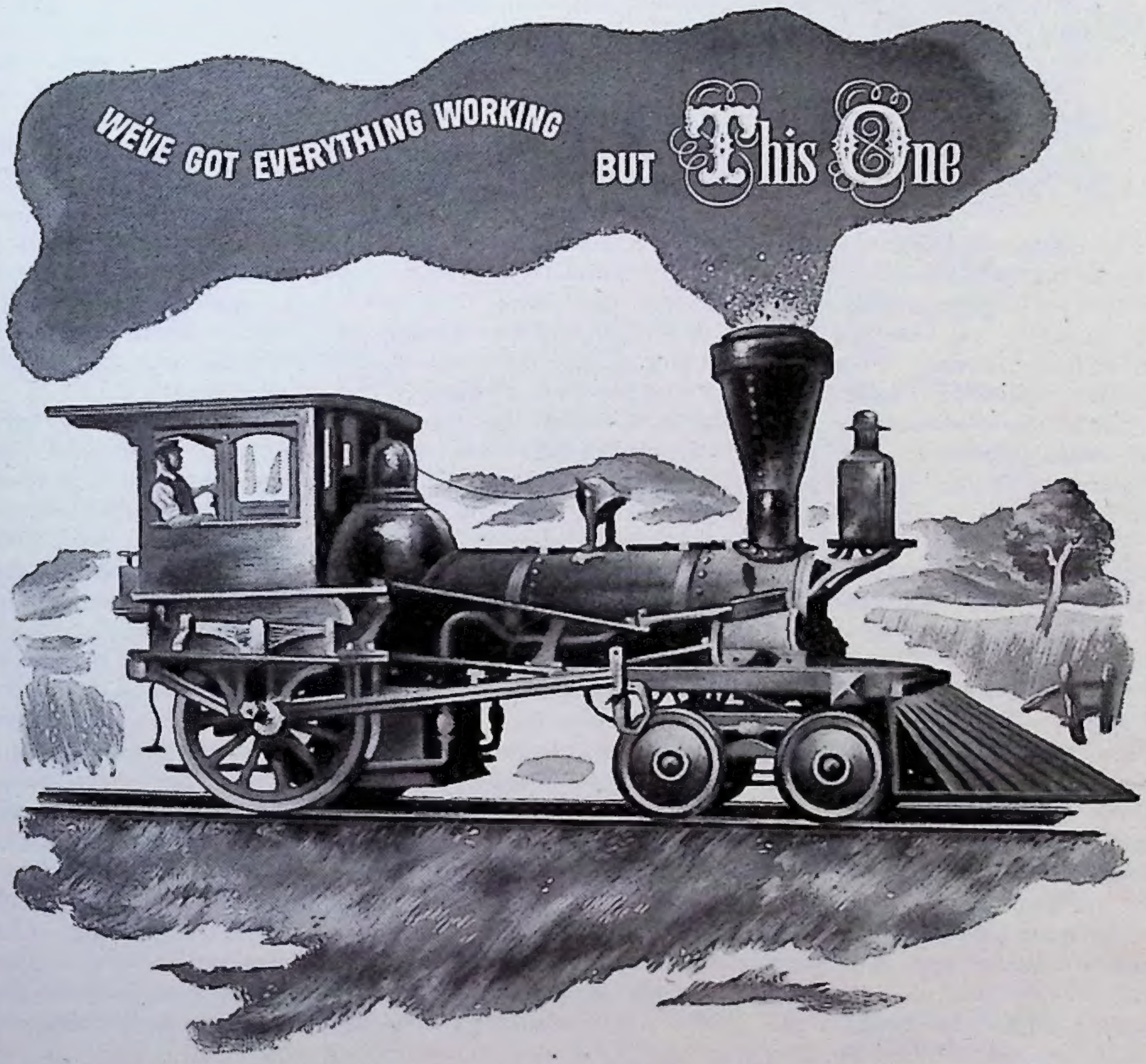


In 1937 the first *Daylight* 4-8-4 locomotives were delivered by Lima to the Southern Pacific. Since then others have followed, until now there are 60 in service, in four slightly differing series.

The dull wartime dress of the 10 4-8-4 general service locomotives delivered by Lima during 1943 is appropriately symbolic of the war activity of this great system.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, O.



It has taken some doing to handle the war load thrust upon the railroads — more than twice as much freight and nearly four times as much passenger traffic as in ordinary times.

And, because of other war needs for materials, it has had to be done with very little additional equipment.

But with the good sportsmanship of travelers and the surpassing aid of shippers the job is being done.

Doing it, though, demands that the railroads use every piece of serviceable equipment or equipment which can be made serviceable. And so they've got everything working now to do the job that must be done now.

But there's still a job ahead — first and foremost, a growing war job, and after that the work of making these railroads ready for the service of the America of the future.

That's why the railroads are not only working but are studying so as to keep ahead of their appointed tasks — to meet the nation's war needs now, and later to provide for peacetime America the finest transportation that experience, plus modern materials and science, can devise.

BUY MORE WAR BONDS

ASSOCIATION OF

AMERICAN RAILROADS

ALL UNITED FOR VICTORY

By Edward Hungerford:

The Man in the Tower

"HE IS not the best operating man in the business, nor is he the greatest traffic getter, nor the greatest financier," said the big Wall Street banker to me.

"Then what is he?" I asked.

"He is the best damn man in the railroad business, that Fred Underwood of the Erie," replied the big banker.

Underwood never liked that remark. When I thrust it at him, he turned quickly and said:

"Perhaps I *am* a poor railroad financier."

And then he began to tell me of a day, not so many years ago, when the land once before faced financial distress and the Erie was at the end of its precarious resources. He had gone to his old friend, J. P. Morgan, had asked him for five million dollars and had been refused. Other New York bankers followed suit. The president of the Erie picked up his morning paper. In it was a dispatch that Judge Elbert H. Gary of the United States Steel Corporation, who had been on a trip to Japan, was on his way home again. . . . Underwood boarded the first train to Chicago, and there he met Gary. He got the five million, and Erie did not go into the hands of a receiver—not then, at any rate. . . . For years afterwards, the photograph of that check hung on Underwood's office wall in New York.

THAT was all of 20 years ago. F. D. Underwood is gone now, but as long as there is an Erie Railroad, and there probably will be an Erie Railroad for a good many years to come, they still will be telling stories of the Old Boss. In every roundhouse from Jersey City to Marion he has become legendary. . . . Stories are told of his peccadillos, of his big kindnesses, his great understanding of human nature . . . of the man who forever was doing the unexpected. Why, do you remember that story about the division superintendent up at Rochester, who with limping equipment carried on through a perfectly awful month of dead Winter, and kept the line open every day of it, only to have Underwood come up, interrogate him and then go off without one word of thanks? But the next month's pay check for that superintendent was doubled by a private one from the president of the Erie.

That was Underwood.

It was Underwood who, as president of the busy little Erie, was hurrying through one night to keep an important business engagement in New York the next morning, and found the sun's earliest rays striking the windows of his car, jacked up in Hornell yard, 332 miles out from New York. "What the hell," said the Old Boss, and went hurrying out into the yard to find the yardmaster and pull his ear right off. What business had he to cut out his car that way and cause engagements to be missed? . . . The yardmaster stood his ground. Yardmasters are that way.

"Got a flat wheel under the 999. Your orders were not to let a car go one unnecessary mile with a flat."

Underwood grinned.

"You stick by your orders," said he.

And the next day the yardmaster had a new gold watch with the compliments of the president of the Erie . . . while an order was posted, saying that more gold watches were in readiness against such emergencies.

The 999 was Fred Underwood's pride. He always did himself well in the matter of a business car. And when the precarious finances of Erie hardly permitted him a suitable new vehicle of that sort, he bought a new car anyway. It is not on record that the 999, which bore the name of Erie subsidiary New York, Susquehanna & Western, ever traveled for a single mile over that road. But it went over many others. Those were the days when the Interstate Commerce Commission was not so persnickity about letting a railroader ride with his car over other roads—without paying for the privilege. And the 999 was just as apt to turn up at Miami or at Santa Barbara as at Buffalo or at Cleveland or at Chi-

Fred Underwood.

cago—and not necessarily with Underwood aboard. The Old Boss had a most generous habit of loaning the car to his friends and cronies, anyone who was close to his heart and who might come along at the right moment.

There is an outstanding Eastern industrialist, who at one time served his term as superintendent of motive power of the Milwaukee. . . . Now, the Chicago, Milwaukee & St. Paul was a road which always was dear to Fred Underwood's big heart. He had been born in Wauwatosa, within sound of the road's great shops at West Milwaukee, and he first had gone to work on that road as brakeman and clerk before he rose to be one of its division superintendents. Almost up to the day of his death he yearned to go back to work on it. He told me so himself a few years ago.

On this particular occasion, the new superintendent of motive power of the Milwaukee had taken one of the road's fine old cars, the *St. Paul*, and had remodeled and refurbished it for his own use and convenience. . . . It stood in the Union Station, Chicago, headed for Milwaukee late one afternoon, and S—, the motive-power superintendent, boarded it just as the train pulled out. . . . A big man sat with his back to him in the observation end of the car. S— never had seen him before. . . . The big man rose to his feet and put out his hand. "I'm Fred Underwood," was all that he said. "I just hankered to ride in the old *St. Paul* once again." He was given a warm welcome. . . . "She rides better than she used to," was F. D. U.'s comment after a few moments. "She rides a lot better than that new 999 of mine, down East. What did you do to her?"

S— explained that he had merely put a lot of railroad iron in the floor to hold it down more tightly on the trucks.

"I'd like to have you tackle the 999," said Underwood after a moment. "Suppose I send it up to the West Milwaukee shops and let you work on it there? Our people don't seem to be up to it."

The motive power man of the Milwaukee was in an embarrassing position. He did not want to put the Erie people in a hole. He hesitated for a moment, then spoke out:

"No, I don't think that we ought to do that, Mr. Underwood," said he. "I don't want your people all hating me. Suppose you send it up to your own car-shops at Buffalo, and I will send over one or two of my men to show them how it should be done."

"You are right," said Fred Underwood, and presently the thing was done—in just that way.

DO NOT get the impression that Frederick D. Underwood was any mere playboy. He was, in his day, one of the best railroad executives that America ever has known. He made history for the Iron Horse . . . first on his beloved old Milwaukee . . . then on the Soo . . . then for a few years operating the Baltimore & Ohio . . . and, finally, as president of Erie for a glamorous quarter of a century.

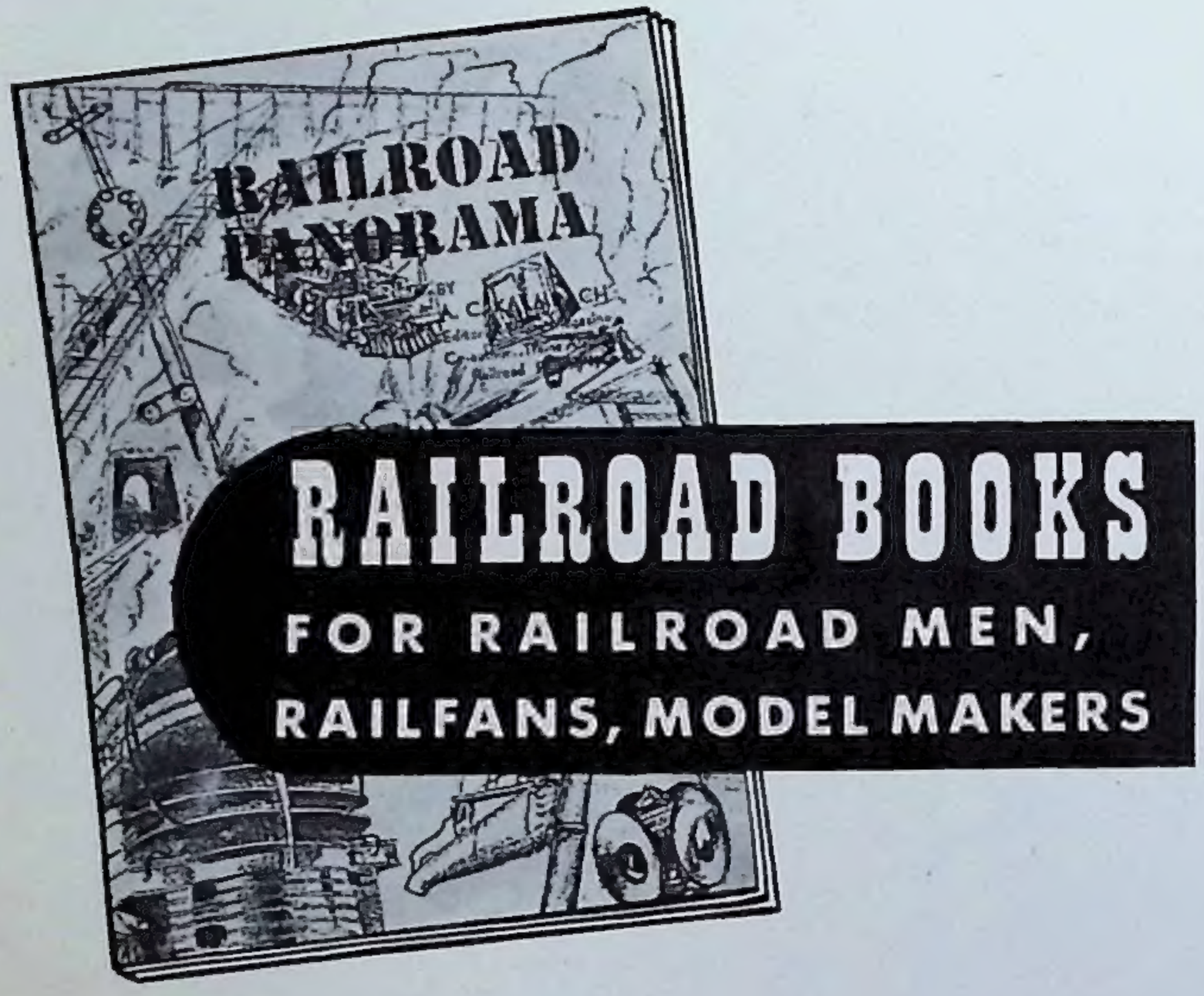
Underwood practically rebuilt the Erie—end to end. He found it struggling woefully, with inadequate and wornout equipment, a twisting, torturous line all the way from New York to Chicago—almost a joke among railroaders everywhere. He completely rehabilitated the line, double-tracked it virtually every mile of the distance from New York to Chicago, reduced its grades, constructed relief lines for many miles for economical freight operation, and bought modern locomotives and cars for it, wholesale. All in all, he spent over $174,000,000 in physical improvements. When he was finished, he had a railroad which, for sheer efficiency, was exceeded by few in all the land.

But he had much more; back of that physical structure was a human one that many of his rivals envied. Morale on the Erie was no idle word. It was tops. Many of its officers and rank-and-filers were woefully underpaid, but that did not seem to count very much. They loved the Old Boss, and that was all that was necessary. For above all other things, he was a fair boss as well as a most generous one, and fairness is about all that any railroader wants to ask of the man over him. That was the quality which enabled him to take a property that for the umpty-umph time in its life was struggling on the rim of bankruptcy, and in 25 years to double its freight traffic from 4,756,339,949 ton-miles to 9,469,280,360 ton-miles a year. At the same time he increased its annual revenues from $40,700,000 to $118,500,000 and cut its freight-train mileage more than 11 per cent. Here was the real answer to the success of the man, born in the Presbyterian parsonage in the little suburban village of Wauwatosa and come to be one of the foremost railroaders of his day.

Here is the real epitaph of a man who loved transport almost more than life itself. . . . He loved ships. In his day he owned a yacht on the Hudson and the Sound and it was a fine one, too. When there were but two automobiles in the whole city of New York, Fred Underwood owned one of them. He loved motor cars. And one of my earliest experiences on the Erie was riding with the Old Boss at 70 miles an hour in a Winton car, fitted with flanged wheels, and wondering whether the thing would take the frogs and stay upon the rails. That was way back in 1905.

But above all, Frederick D. Underwood loved trains. He loved the Erie trains and perhaps, even more than those, he loved the pumpkin-yellow trains of the old Milwaukee road. He believed in trains. His belief in the railroad was almost fanatic. Because of that belief and of his unending faith in men, in railroad men in particular, this man, so big in frame and in mind and heart, achieved a reputation and a success that was little short of tremendous.

Edward Hungerford



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